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This publication explains (in an historical framework) how Section 208 and other planning provisions of the Clean Water Act and EPA's Water Quality Management program assist States, regional agencies and local governments to control nonpoint source pollution. It also explains the role of USDA's Rural Clean Water Program and other USDA conservation, research and extension programs in assisting conservation districts, farmers and other rural people to control nonpoint source pollution.

A general analysis is made of State and local government regulatory powers and the powers of conservation districts to both regulate nonpoint source discharges and encourage their control without regulation. Examples of district regulations are discussed as are State nonpoint source control laws that exempt agricultural sources. A model state law and wight existing state laws with agricultural nonpoint source control provisions are discussed in detail, together with the views of State administrators concerning their potential effectiveness.

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INSTITUTIONAL BASES FOR CONTROL OF NONPOINT SOURCE POLLUTION UNDER THE CLEAN WATER ACT--WITH EMPHASIS ON AGRICULTURAL NONPOINT SOURCES

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Institutional Bases for Control of Nonpoint Source Pollution Under the Clean Water Act--With Emphasis on Agricultural Nonpoint Sources

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Institutional Bases for Control of Nonpoint Source Pollution Under The Clean Water Act--With Emphasis on Agricultural Nonpoint Sources

Nonpoint Source Control Law Before 1972

Until the Federal Water Pollution Control Act (FWPCA) was completely revised by Public Law 92-500 (the FWPCA amendments of 1972),[1] EPA's program for dealing with nonpoint source pollution was limited to research. Several other Federal programs did have an indirect effect on nonpoint source (NPS) pollution. These included soil conservation, soil survey, and watershed protection programs administered by the Soil Conservation Service, the Agricultural Stabilization and Conservation Service's agricultural conservation program (ACP), the Federal-State extension service's conservation education program, and the pesticide registration and labeling program, administered until 1971, by the Agricultural Research Service and since then by the Environmental Protection Agency.

In addition, a few States had strip mine reclamation laws. A smaller number of States and several local governments had regulatory programs dealing with sediment control at construction sites. A handful of Western soil and water conservation districts had adopted land use regulations requiring wind erosion control practices. In 1971, Iowa passed a statute requiring soil conservation districts to adopt soil loss limits for all land in the district and providing that farmers may be required to install erosion control measures when 75 percent cost-share assistance is made available.[2] An Ohio program, intended to bring both agricultural discharges (including point source pollution from feedlots) and urban sedimentary discharges into line with State water quality standards, was also authorized by legislation in 1971 and 1972.[3]

Furthermore, almost all the States had programs requiring the registration and use-labeling of pesticides in intrastate commerce. Many also restricted the use of certain pesticides dangerous to the environment. And a few imposed a total ban on such pesticides as DDT and endrin.

FWPCA Emphasis on Point Source Controls

Public Law 92-500 also put its main emphasis on point source control. It established a nationally coordinated permit program, the National Pollutant Discharge Elimination System (NPDES), for all discharges from municipal treatment plants, factories, mines, feedlots, and other discrete sources and required that all permitted discharges be consistent with EPA effluent limitation guidelines.[4] The 1972 amendments also established time-phased, progressively more stringent technological performance standards for all point sources. All publicly owned treatment plants were required to provide secondary sewage treatment and all industrial facilities "best practicable control technology currently available" (BPT) by July 1, 1977. By 1983, publicly owned treatment plants were required to provided "best practicable waste treatment technology", including "reclaiming and recycling of water and confined disposal of pollutants" and all industries to install "best available technology economically achievable" (BAT).[5]

These deadlines have been extended somewhat by the Clean Water Act of 1977.[6] In addition, the Clean Water Act has changed the second step performance standards for industrial point sources, divided for this purpose into three categories discharging (1) conventional,[7] (2) toxic,[8] or (3) nonconventional,[9] pollutants. But the 1977 amendments have not changed the principle of point source permit requirements based on Federal performance standards spelled out in Federal effluent limitations.

There is no provision in the FWPCA for Federal regulation of nonpoint source pollution. However, Public Law 92-500 declares that the objective of the FWPCA is restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters[10] and declares a national water quality goal of fishable, swimmable waters, wherever attainable by 1983.[11] To achieve these objectives, it also enunciates a national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of (all) sources of pollutants in each State.[12] It further provides in section 208[13] for Federal grants to areawide waste treatment management planning processes that would provide implementable plans. Section 208 specifies that the areawide plan must include identification of significant nonpoint sources of pollution and procedures and methods to control them, in addition to systems of coordinated point source treatment works. The 1972 amendments further provide in section 303(e)[14] for the incorporation of all elements of the areawide waste treatment management plans into the federally subsidized State continuing planning processes for implementation of State water quality standards.

Pollution from Land Use--Distinguishing Point Sources from Nonpoint Sources

Since the NPDES permit system for point sources is the great innovation of Public Law 92-500 and the main means Congress chose to restore the integrity of the Nation's waters, the act provides a definition of point sources as follows:

". . . The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged."[15]

Nonpoint source pollution was not defined by the statute but was understood by process of exclusion to refer to pollution that is:

(1) generated by diffused land use activities, not identifiable facilities,

(2) conveyed to waterways through natural processes such as storm runoff or groundwater seepage, rather than by deliberate, controllable discharge,

(3) not susceptible to "end of pipe" treatment, but controllable by changes in land management or process practices.[16]

However, EPA recognizes that some point sources of pollution, as defined in Public Law 92-500, are similar to NPS in that they too are caused by land use activities and can be best controlled by changes in land management practices, instead of effluent treatment. In 1973, while EPA was beginning to set up the NPDES by issuing permits to major municipal and industrial sources and before the 208 planning effort had begun, EPA promulgated regulations exempting certain categories of land-use-generated point sources from the permit program.[17] This was done on the ground that processing these small but numerous sources would result in great administrative difficulties.

The 1973 regulations were opposed by environmental organizations who argued that the plain language of Public Law 92-500 required effluent limitations for all point sources and that the FWPCA gave EPA no other methods except the permit program to implement such effluent limitations.[18]

In March 1975 Judge Flannery ruled, in the first of two leading cases entitled Natural Resources Defense Council (NRDC) v. Train, that Public Law 92-500 required EPA to find appropriate means to include all (except trivial) point sources in the NPDES.[19] Consequently, in the spring and summer of 1976, EPA promulgated regulations, including in the permit program several types of point sources that had previously been excluded. These were:

(1) Small feedlots discharging pollution through manmade conveyances or directly into on-site waters. (Larger feedlots were already included).*[20]

(2) Discrete conveyances or ditches from which "irrigation return flows" (not merely storm runoff) is discharged.[21]

(3) Separate storm sewers in urban areas, or, where special pollution problems exist, rural areas.[22]

(4) Facilities for four specific activities associated with silvicultural enterprises: rock crushing, gravel washing, log sorting and log storage. (EPA considered most silvicultural activities, including runoff from nursery operations, site preparation, reforestation, thinning, prescribed burning, pest and fire control, harvesting, surface drainage, and road construction to be nonpoint source activities).[23]

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* The smallest feedlots remain exempt unless designated on a case by case basis by the State permitting agency or EPA.

It was recognized from the first that it was unnecessary and burdensome to require all irrigators to prepare permit applications or to monitor, inventory, sample, record and submit reports. Consequently, EPA's 1976 regulation stated that, except in a few cases of very serious pollution problems, irrigators would not be required to apply for individual permits. Instead, they would be issued general permits requiring them to conform to pollution control methods that would be set forth in the areawide 208 plans, once these were adopted.[24]

But this did not placate the continuing opposition to any requirement of a Federal permit for irrigated agriculture, with its implication that implementation of on-farm land management practices would be subject to Federal enforcement procedures. Consequently, Congress overturned the Flannery decision, so far as it applied to irrigation, when it passed section 33 of the Clean Water Act of 1977. Section 33 [25]states that irrigation return flows are not to be considered point sources, are not to be included in the NPDES, and are to be dealt with, where appropriate, in the 208 planning process. In other respects, the Flannery decision and the 1976 regulations carrying it out are still in force.

Categories of Nonpoint Source Pollution

Nonpoint sources generally coincide with types of land use. Since they are diffused and discharge pollutants to water via widely dispersed pathways, they are generally significant sources of pollution only when they involve large land areas. One way to classify NPS source pollution that may be useful is as follows:

Sediment

Sediments carried by soil erosion represent by far the greatest volume of wastes entering surface waters. Although it is not possible to keep all waters crystal clear,* excessive sediment loads raise water treatment costs for municipalities. They cause aesthetic degradation, damage to domestic and industrial water supplies and water recreation, destruction of wildlife, and clogging of reservoirs and channels. In addition, sediment has frequently been identified as the principal transport mechanism for much of the plant nutrient wasteload that accelerates lake eutrophication as well as pesticides, organic and inorganic wastes, and pathogens.[26] However some scientists have disputed that phosphorus adsorbed to clay is an important cause of the eutrophication of all but very shallow lakes. They have asserted that eutrophication of deep lakes results mainly from dissolved phosphorus (which is released from municipal outfalls, septic tanks, and runoff-borne animal wastes and fertilizers) not incorporated in sediment.[27]

Cropland is the chief source of sediment on a total mass basis; 50 percent or more of the sediment deposited in streams and lakes is credited to agriculture.[28] The National Commission on Water Quality's staff report found high concentrations of suspended solids linked to cropland in the Great Plains, Midwest, Southwest, and Central Valley of California. In significant portions of those regions, the polluting effort of agricultural activities is augmented by the natural high erodibility of the soils of the drainage basins.[29]

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* This is because flowing waters have fixed minimum carrying capacities. If control of discharges reduces suspended solids below these minimum levels, the flowing waters will attempt to restore these minimum levels by scouring the beds and banks of the watercourse.

Construction and strip mining activities yield large quantities of sediment in relatively small land areas. Sediment from these sources can have a highly adverse impact on water quality. Construction generated sediment of more than short term significance is often situated in urbanizing areas where it becomes a threat to water supplies and public recreation. Mining activities cause sediment problems in the Appalachian and Rocky Mountains.[30]

Well managed forests are exceptionally free of erosion and sediment pollution, but harvested forests are erodible, highly so if timber harvest is poorly managed. Forestry practices which disturb the land surface have caused increased turbidity in streams of the Pacific Northwest and Appalachian regions.[31]

Nutrients

Nutrient elements, chiefly phosphorus and nitrogen, enter waters in municipal discharges, urban storm runoff and combined storm and sanitary sewer overflows as well as in runoff, seepage and percolation from lands managed for intensive production of livestock and crops.* Because of the contribution of phosphorus and nitrogen to lake eutrophication and nitrite the potential pollution of groundwater drinking supplies by nitrates, nutrients are sometimes considered a more serious pollution problem than sediments per se. They received a great deal of attention in the early and mid-1970's because nutrients levels in many areas were continuing to rise, whereas oxygen-demanding wastes, coliform bacteria, metals and chemicals including pesticides, were declining.[32]

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* Phosphatic detergents have been identified by some scientists as the largest source of phosphates in municipal discharges. It should be noted that, in areas where such detergents have not been banned, they are released into ground and surface waters by sources not included in the NPDES (septic tanks and fields) as well as municipal point sources.

Runoff from agricultural lands is a major contributor to nutrient levels in the Southeast, Southern plains, Midwest and Central Valley of California although in some areas nitrate pollution of groundwater occurs naturally.[33] A committee of the National Research Council has found that relative losses of nitrogen from cropland vary significantly as a result of such agricultural practices as timing and amounts of fertilizer application.[34]

Mineral pollutants

Most nonpoint source pollution from minerals other than nitrates and phosphates results from mining activities. Mine drainage in addition to degrading water quality by acids, salinity, and hardness of minerals carries trace elements of toxic metals (lead, arsenic, zinc, cadmium, copper).[33] Toxic metals are also carried to water in urban runoff and in point source effluents.

In agricultural production, the chief mineral pollutant from a nonpoint source is salinity in the return flows. Both point source and nonpoint source salinity pollution from irrigated lands is exacerbated by natural saline conditions in the Colorado basin.[34]

Pesticides

Pesticides are widely used in agriculture and less extensively in silviculture, construction, and urban land uses. They are transported from soil to water directly in runoff and sediment and indirectly by careless application and spray drift.

The chief damage to water quality from pesticides has resulted from the persistence of some kind of pesticides in the aquatic environment where they are accumulated by fish and other food chain organisms, causing damage to wildlife high in the flood chain. Because persistent pesticides are no longer in common use this damage is decreasing. However, pesticide concentrations exceeded suggested safe limits or were linked with fish kills at 13 of 26 sites studied by the National Commission on Water Quality in the early and middle 1970's. The major pesticide source at 8 of the 13 problem sites was runoff from agricultural land.[35]

Oxygen-Demanding Wastes

Organic wastes are transported to streams in sediment and runoff from paved surfaces and have essentially the same adverse effects as the much greater loadings of organic wastes from municipal and industrial point sources and feedlots. Crop debris, livestock wastes, waste petroleum products, forest litter and numerous solid waste materials are included in this type of pollution.[36]

Pathogens

Health hazards in the form of infectious pathogens are generally assumed to be present when evidence of animal or human fecal matter, as measured by noninfectious, fecal coliform bacteria, is found in the water. While these pathogens can be effectively controlled in drinking water supplies by suitable treatment processes, their presence in surface waters can make those waters unfit for contact recreation.

By far the greatest part of the coliform bacteria in the Nation's waters emanates from point sources: municipal effluents and, to a lesser degree, runoff from livestock feedlots. But other sources of bacterial contamination include runoff from urban, range and cropland and contamination of ground water from septic tank drain fields.[37]

The Function of the Planning Provisions of Public Law 92-500 as Applied to Nonpoint Source Pollution Control

The FWPCA amendments of 1972 provided that both point source and nonpoint source pollution control would be achieved on the basis of plans--a concept that was much complicated by the statutory requirement that all publicly owned treatment facilities install secondary treatment, and all industrial point sources install BPT, by July 1977.

It has already been mentioned that the Act of 1972 declared a "national policy that areawide waste treatment planning processes be developed and implemented to assure adequate control of sources of pollutants in each State."[38]

This policy must be read into the three distinct planning processes created by the Act.

(1) Facilities planning for construction grants to publicly-owned treatment plants under section 201. Section 201(c)[39] requires facilities planning to fit in with areawide waste treatment management providing control or treatment of all point and nonpoint sources "to the extent practicable."

(2) Areawide waste treatment management planning under section 208.[40] The section 208 process is the principal section applying land use planning to the problem of pollution control. It provides for siting and sizing

of point source discharges on an areawide basis over a 20-year period as well as residuals disposal and nonpoint source controls. This section is the basis of the subject of this paper and will be outlined in detail, below.

(3) State planning for implementation of water quality standards under section 303.[41] This section is concerned with classification of and provision of effluent limits and maximum daily loads for all the waters of the State. It also provides, under section 303(e),[42] for a continuing planning process incorporating all elements of any applicable areawide waste management plans under section 208, adequate authority for intergovernmental cooperation, and pollution abatement compliance schedules (including by implication NPS compliance schedules) for all the waters of the State.

Outline of Section 208

The major provisions of the areawide waste management planning section are the following.

- Governors of States are directed to identify and designate areas which, because of "urban-industrial concentration and other factors" have substantial water quality problems. Governors are also directed to designate "a single representative organization" including elected officials from local government. The same procedure is available for interstate areas, in which case each Governor must participate.
- If the Governor does not designate and does make an affirmative decision not to designate an area, the "chief elected officials of local governments" may agree to designate an area and a planning agency for such area. In interstate areas, Governors do not have a nondesignation option

and local officials may designate the area and agency whenever the Governors do not.

· All areas and agency designations must be approved by EPA.

· The State must act as the planning agency for all portions of the State which have not been specifically designated.*

· Designated agencies must have a continuing planning process in operation within one year of designation. Until the 1977 amendments, the initial plan was required to be certified by the Governor and submitted to EPA for approval within 2 years of the commencement of the operation of such planning process. The 1977 amendments extended the planning period an additional year.

· All plans must include the following:

·· All the elements needed for a coordinated point source control plan for the next 20 years, annually updated and including analysis of alternative systems. This would include treatment works, waste water collection and storm sewer systems and construction priorities and time schedules.

·· A comprehensive regulatory program to (1) implement point and nonpoint source requirements and pretreatment requirements for industrial wastes discharged into public sewage systems and (2) regulate the location, modification and construction of facilities resulting in new discharges.

·· The identification of those agencies needed to construct and operate facilities required by the plan and to otherwise carry out the plan.

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* This provision is section 208(a)(6). Most predominantly agricultural areas with no substantial urban or industrial component fall into this category.

·· The identification of the measures needed to carry out the plan, including financing, the period of time and costs of carrying out the plan within such time--together with the economic, social and environmental impact of such implementation.

·· A process to identify, if appropriate, procedures and methods to control, to the extent feasible, (1) agricultural and silvicultural nonpoint sources including (since the 1977 amendments) irrigation return flows, (2) all mine related sources, and (3) construction related sources. Control measures may specifically include "land use requirements." If the State determines for any of these sources that consistency with a State regulatory program under section 303 so requires, the process may be developed by the State and submitted to EPA for application to all areas in the State.*

·· A process to identify salt water intrusion into estuaries and up rivers and to control such intrusion to the extent feasible, where consistent with the overall plan.

·· A process to control the disposition of residual wastes in water.

·· A process to control the disposal of pollutants on land or in subsurface excavations to protect water quality.

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* The provision that the State can bypass areawide regulatory programs and substitute a State regulatory program is section 208(b)(4). This provision also applies to salt water intrusion, disposition of residuals and disposal of pollutants on land or in underground excavations. The areawide plan elements to which section 208(b)(4) is applicable are specified in section 208(b)(2)(a-k).

- Areawide plans must be certified annually by the State(s) as being consistent with applicable basin plans and approved annually by EPA.

- The Governor in each State, in consultation with the areawide planning agency, must designate one or more waste management agencies. EPA must accept such designation providing the agency or agencies have adequate authority to carry out the plan.

- Once a plan is accepted and the management agency designated, all construction grants for projects within the area must be made to such agency for works in conformity with the plan. All permits for point source discharges within the area must also be in conformity with the plan.

Section 208 (as passed in 1972) also provided for Federal grants of 100 percent of the costs of the areawide waste treatment planning process for fiscal years 1973-1975. Beginning in fiscal year 1976, grants were not to exceed 75 percent of the planning costs. Section 208 also authorized appropriations for planning grants of $50 million in fiscal year 1973, $100 million in 1974 and $150 million in 1975.

In actuality, for reasons of point source control strategy, EPA was not willing to begin 208 planning before getting a start on wasteload allocation and river basin planning of major point sources under Section 303. Although the statutory authorizations were fully funded by Congress, EPA neither spent nor obligated any of its fiscal 1973 funds and only $13.7 million of its fiscal 1974 funds. But the full $150 million was spent in fiscal 1975.[43] Congress appropriated $53 million for fiscal 1976 and $4 million for the transitional quarter, at the 75 percent funding level (since the period of 100 percent funding was expired), $ 15 million was appropriated for fiscal year 1977, $69 million for fiscal 1978, and $32 million for fiscal 1979.[44]

In May of 1976 the District of Columbia district court ruled, in response to a lawsuit by the National Association of Regional Councils (NARC), that EPA must release the unobligated $136.3 million of the 1973 and 1974 grant money.[45] This ruling was appealed by EPA and reversed in part in September 1977 by Judge Tamm of the District of Columbia Circuit Court of Appeals. The Court ruled that EPA had no authority to release the unobligated 1973 and 1974 funds after the budgetary authorization expired. Judge Tamm agreed with the district court's decision that the deadline for award of 100 percent grants should be extended to implement Congressional intent that 100 percent funding of $150 million be made available for initial participation in the 208 planning process. He remanded the case to the district court to devise a formula for using funds appropriated for 1975 and subsequent years to bring grants up to 100 percent, suggesting that it might be consistent with congressional intent to limit such grants "to those parties who took the necessary steps within the prescribed time periods following November 28, 1975."[46]

Section 31 of the Clean Water Act of 1977 made the decision in NARC v. Costle immaterial by amending section 208 to provide that areawide agencies designated after 1975 and State agencies acting as planning agencies for all undesignated portions of the State have 3 years after receipt of first grant to complete the initial plan.[47] This means that the planning agencies will not lose any of the funds they would have received if the program had begun on time.

Section 31 also provides 100 percent funding for the 2 years following the first grant in all cases where the first grant was made before October 1977. Third year grants and any subsequent 208 planning grants may not exceed 75 percent.[48]

Section 35, the so-called Culver amendment of the Clean Water Act (Section 208(j) of the FWPCA),[49] authorizes a program of assistance to landowners and operators for installing best management practices for NPS control and authorizes appropriations to the Secretary of Agriculture for this program of $200,000,000 in fiscal 1979 and $400,000,000 in fiscal 1980.*,** The Culver amendment authorizes the Secretary (acting through SCS and such other agencies as he designates) to enter into 5 to 10 year contracts with landowners and operators to provide cost sharing and technical assistance for carrying out BMPs identified in the agricultural portion of the 208 plan and incorporated in soil conservation district-approved plans. Such contracts would only be entered into areas or States where section 208 plans have been certified by the Governor and approved by EPA and where the designated management agency assures an adequate level of participation by owners and operators controlling rural land. Priority in providing assistance will be given to those areas and sources that have the most significant effect on water quality.

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*This amendment is the bases for the Rural Clean Water Program which will be discussed later. $2.4 million was appropriated to prepare the administrative basis for this program in 1978, but no 1979 or 1980 cost sharing funds have been appropriated as of this writing.

** In addition to this authorization, USDA funds and technical services are available for implementation of BMPs through the Agricultural Conservation Program, the Great Plains Conservation Program, conservation operations technical assistance and technical and educational extension.

The amendment authorizes the Secretary to provide cost sharing for those BMPs for which he determines that cost sharing is appropriate and in the public interest and which have been approved by the designated management agency. Federal cost share would be limited to 50 percent of the cost of carrying out such practices (including labor) except where the Secretary determines that a higher cost share is justified. Such justification must be based on his findings that (1) the main benefit from the practices relate to off-site water quality, and (2) the matching share requirement would place a burden on the landowner which would probably prevent him from participating in the program.

It authorizes the Secretary to make agreements where practicable with soil conservation districts, State soil and water conservation agencies and State water quality agencies to administer all or part of this program, under his regulations. Where not practicable the Secretary is authorized to administer this program through the Agricultural Stabilization and Conservation Service.

Delayed Inception in 208 Planning Program

During the first years following the passage of Public Law 92-500, EPA concentrated on issuance of permits to point source dischargers and awarding construction grants to meet the 1977 technological performance standard. Since section 208 provided for statutory time-lags (1 year for designation of agencies, followed by 2 years for preparation of a plan) it could not be used for this effort and was assigned a low priority. Instead, EPA emphasized State river basin plans under section 303. The river basin plans, which were used in issuing NPDES permits mainly consisted of analysis of water quality and allocation of waste loads among point source discharges.[50]

EPA's water strategists also felt that neither the agency nor the State and local governments responsible for 208 planning had sufficient expertise relating land use to water quality and that substantial study should precede the requirement that this planning be done.[51] Section 304(e) of the act[52] directs EPA to issue information on identification and control of NPS pollution to section 208 agencies, State pollution control and other concerned public agencies. Acting under this authority, as well as general research and information authorities, EPA began, in the spring of 1973, to let numerous contracts and grants to Federal and State agencies and private organizations to develop information concerning nonpoint source pollution control. It then promptly published and distributed the resulting reports.*[53]

Furthermore, EPA at first believed that waste management efforts in addition to point source control would only be needed in a few highly populated areas with extremely large wasteloads. Although section 208(b)(6) required the State to prepare areawide waste management plans for all undesignated portions of the State, EPA, at first, interpreted this provision to mean that the State river basin plans under section 303 would serve as areawide waste management planning in most areas of the State. Such river basin plans could be expanded, if deemed appropriate by the State, to include identification of nonpoint sources and of procedures and methods to control it, as provided by section 208(b)(2)(F-K)[54]

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* EPA contract information concerning agricultural nonpoint source pollution control methods has mainly been developed by agencies of the Department of Agriculture, including the Agricultural Research Service, Economic Research Service, Forest Service, and SCS and by private research organizations. Information concerning State and local legislation related to agricultural nonpoint source pollution has mainly been developed by the National Association of Conservation Districts and by the private legal research organization. See note 53.

During this period EPA deferred virtually all activities under section 208. Interim Grant Regulations and draft Guidelines for Areawide Waste Treatment Management were not published until May 1974.[55]

By the Fall of 1973, however, as Wise and Associates point out, the House and Senate Public Works Committee, environmentalists, and organizations representing local and regional governments were all exerting pressure on EPA to begin the section 208 program.[56] Furthermore the 1973 needs survey, authorized by section 516 of the Act,[57] indicated that the costs of structural solutions to both municipal treatment and urban runoff problems would be monumental. Consequently, EPA officials began, at this time, to view 208 as a way to achieve cost effective solutions in urban-industrial areas based on examination of many alternatives--structural and otherwise--such as recycling, land disposal, better land use, growth controls and user charges.[58]

Next, the Agency began to release appropriated 208 grants funds and funded a pilot project to the Raleigh-Durham regional agency to show how a 208 planning process should operate.[59] EPA's March 1974 Water Quality Strategy paper stated that the Agency planned to designate 130 areas by the end of Fiscal 1975.[60] (The March 1975 strategy paper was to raise this number to 148*[61]). Designated areawide agency planning was not intended to affect decisions on programs or source abatement during Phase I (until secondary treatment and BPT were reached) but would be a basic structure for implementation of Phase II.[62]

During the summer of 1974, two of EPA's 208 policies came under fire and were revised. First the restricting of 208 designation to urban-industrial areas was abandoned in response to the request of the Governor of Maine for designation of the Southern Maine and Northern Maine regions, two rural areas with substantial nonpoint source water quality problems. Next the meaning of the term "substantial water quality problems", originally restricted to water quality limited areas, was liberalized to include clean water areas such as Lake Tahoe and Rifle, Colorado, where water quality is threatened by potential pollution from wastes of rapid residential or energy development.[63]

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* As of this writing there were 1976 designated areawide waste management planning agencies.

This left still unanswered the question of what the States were required to do, under section 208(a)(6), in their capacity of planning agencies for the undesignated areas, which constituted about 95 percent of the Nation's land. In October 1974, in the second leading case entitled NRDC v. Train, the Natural Resources Defense Council and the Environmental Defense Fund brought suit against EPA for a declaratory judgement that section 208(a)(6) "requires a State to act as the section 208 planning agency for nondesignated portions of the State in the same manner as planning organizations designated by the Governor do and that waste treatment planning is required of a State for nondesignated portions of the State."

Natural Resources Defense Council, Inc. v. Train et. al.[64]

In June 1975, Judge Smith of the District Court of the District of Columbia issued a memorandum and order which upheld the views of the plaintiff environmentalist organizations.

Judge Smith examined the act and its legislative history and found that section 208 is the critical section of the statute for coordinating implementation and planning as well as point source and nonpoint source pollution control. Furthermore section 208 is aimed at achieving the 1983 goal of fishable, swimmable waters by preventing future pollution as well as by cleaning up existing pollution.

Judge Smith found that subsection (a)(6) is the "residual clause" in section 208 that directs the State to achieve for the "leftover" portions of the State, the same task that the area planning organizations, designated according to previous subsections, are directed to achieve for their areas. But this does not mean that subsection (a)(6) regulations should call for rigorous planning where no pollution problems exist. A State may certify large portions of its territory as pollution-free and concentrate on measures for prevention. EPA regulations should permit a multitude of planning approaches geared to the problem of each area.

The court order directed EPA to begin the process of developing section 208(a)(6) regulations consistent with its decision, and declared that funding for areawide waste treatment management planning under section 208(f) should be made available to the States for section 208(a)(6) planning.

In view of the fact that the 1976 statutory deadline for 208 plan submission could no longer feasibly be met for State plans for nondesignated areas, the court ordered both the plaintiffs and EPA to furnish it with proposed timetables for the phased compliance of section 208(a)(6) planning with the requirements of section 208 and the goals of the Act.

On July 26, 1975, Judge Smith issued his final order directing EPA to revise its regulations to require final submission of complete section 208 plans for nondesignated areas of all States by November 1, 1978.[65] Section 31 of the Clean Water Act of 1977 has since extended this deadline another year.[66]

The November 1975 Regulations--Consolidation and Integration of State and Areawide Planning

The Smith decision was expected to greatly increase the responsibilities of the States for waste treatment management program planning in nondesignated areas. EPA has interpreted it as also requiring the State to assure that all the requirements of section 208 are achieved Statewide, in designated as well as undesignated areas, and has redesignated the Act's planning regulations in order to achieve this.

On November 25, 1975, EPA published new final regulations for:

(1) Section 208 grants.[67] Part 35 sets forth procedural requirements for grants to both State planning agencies and areawide planning agencies for 208 planning. It requires that 208 plans be annually updated at State expense, after the initial federally assisted plan is completed. It strenghthens the States' management role in areawide planning by providing for State review of areawide agency grant applications, workplans, and interim progress reports. It also provides for preadoption review of final plans.

(2) The State continuing planning process.[68] Part 130 sets forth requirements for the State continuing planning process under sections 303(e) and 208 and the designated areawide agency's continuing planning process under section 208. It is also applicable to related State responsibilities that are not discussed here, such as water quality standards, the Statewide nondegradation policy, the annual State strategy for program implementation under section 106 of the Act and the annual State report to EPA and Congress under section 305(b).

(3) Preparation of Water Quality Management Plans.[69] Part 131 sets forth requirements for preparation of section 208 plans (by both State and designated area agencies) and for establishment of regulatory programs to achieve the act's 1983 water quality goal of fishable, swimmable waters, whenever attainable.

The November 1976 regulations require that the States assume responsibility for water quality management plans throughout the States. This is to be done directly in State planning areas (after consultation with local officials) and indirectly in designated areas, through coordination with areawide planning agencies. State planning areas may cover the entire State outside of designated areas or may single out specific areas. All initial State and areawide water quality management plans must be completed, adopted by the State and submitted to the Regional Administrator for approval no later than November 1, 1978.[70]

The level of detail and timing of plan preparation for State planning areas is permitted to vary, according to the water quality problems of the area, and is to be established, after public participation, by agreement between the State and the EPA Regional Administrator.*[71] The State planning agency (to be designated by the Governor) may delegate any portion of its planning responsibilities to other appropriate State, local or Federal agencies. Delegation of planning responsibilities to Federal agencies, who are willing and able to undertake the task, is expressly encouraged.[72]

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* This means that the State-EPA agreement determines, among other things, which categories of nonpoint sources require study.

The State planning agency is responsible for seeing to it that State and areawide water quality management plans are coordinated with other State and local use plans. The State planning agency is also responsible for coordination with all Federally sponsored or assisted plans and programs in the State, involving resources development, environmental protection, land use management, safe drinking water, transportation, housing or community development activities.[73]

The State is also responsible for making sure that there is appropriate input from other elements of the State water pollution control program, such as surface and ground water quality monitoring and surveilance and municipal facilities planning.[74] In addition, the State is responsible for providing the intergovernmental cooperation needed to prepare and carry out the plans. As part of the responsibility, a State policy advisory committee must be set up with majority representation of local elected officials* plus representation of affected Federal agencies, other State agencies and representatives of the general public. Alternatively one such committee may be set up for each State planning area.[75] In designated areas, areawide policy advisory groups composed of State, public and Federal representatives are required. By agreement between EPA and the Department of Agriculture, the Army and Interior, representatives of the latter three departments must be invited to participate in the areawide policy advisory groups.[76]

Provision must also be made for public information and participation at several key points in the planning process.[77]

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* Unless the Regional Administrator agrees to a lesser percentage at the request of the State.

The State is also responsible for resolving conflicts between the designated agency's plan's recommendations for implementation and existing State and local law.[78] It is also responsible for determining the adequacy of areawide plan recommedations concerning the management agencies that the Governor is required to select to implement such provision of the plan.[79] In adopting a plan, the State must certify that the plan is the official water quality management plan for the area and that it will be implemented and used for establishing permit conditions, schedules of compliance, priorities, for awarding construction grants and nonpoint source controls.[80]

The same basic plan contents concerning nonpoint source pollution are required for both designated planning areas and State planning areas. These are:

(1) An assessment and evaluation of nonpoint source problems by category and waters affected,[81]

(2) An identification and evaluation of measures needed to produce the desired level of control--including best management practices, proposed regulatory programs, proposed management agencies, time needed, and estimated costs by agency and activity in 5-year increments.[82]

If nonpoint source control planning is done on a Statewide basis, all requirements of State nonpoint source plans are required to be incorporated into each affected areawide plan but the plan must set forth whatever additional local actions and programs are needed to carry it out in the area.[83]

Sources of Regulatory Authority for Implementation of Nonpoint Source Pollution Control

The Smith decision and EPA's Water Management Planning regulations have given the States the "backstop" responsibility for establishing and implementing the land use control and land treatment aspects of the Federal Water Pollution Control Act. In so doing, they have put the responsibility at the level of government that is most unquestionably capable of exercising it, on the basis of both legal powers and political acceptability.*[84] The only grounds for uncertainty was whether the

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* It can hardly be questioned that it is more politically acceptable for the States than the Federal Government to develop programs to control polluting land uses. But whether the political situation of the States will permit them to exercise this responsibility stringently enough to clean up pollution, when the livelihood of significant numbers of their population is, or appears to be, threatened, is another question.

The history of the Federal water pollution control program shows that Congress gave EPA authority to make and enforce point source effluent limitations for factories because the States in which they were located were unable to regulate factory discharges stringently enough to satisfy the demands of the national public and, and in most cases, the State public as well. In the case of agricultural pollution, the political problem of the States is compounded by a market system that frequently makes it impossible for farmers to raise prices to cover increased costs.

Consequently, as John E. Montgomery points out, some States may be tempted to adopt minimal controls on agricultural pollutants to protect their farm enterprises. And this, in turn, may lead other States to do the same thing in order to avoid putting their own farmers at a competitive disadvantage. See note 84.

States or the local governments were the appropriate level of government to bear this responsibility, since the Federal Government does not have any existing land use regulatory authorities and Public Law 92-500 does not create any.

Let us suppose that the FWPCA was amended to give EPA a role in creating and enforcing nonpoint source controls that was comparable to its authority over point source pollution controls. Would such an amendment be found constitutional? There is always the likelihood of a constitutional challenge whenever Congress creates Federal regulatory authorities over a new area of national concern. This is because Federal laws must be based--by however long and tenuous a route--on the powers expressly given to Congress by the U.S. Constitution.

Nonetheless, there is a strong likelihood that any Federal regulation for the purpose of water pollution control, even direct nationwide regulation of polluting land uses, would be held constitutional. This is because a long line of Supreme Court decisions have extended Congress' power to regulate interstate commerce to include almost any regulation that can be construed as protecting or improving navigable waters.[85]

However Congress does not exercise every power that it has. When Public Law 92-500 was enacted, there was a strong feeling that nonpoint source pollution is too highly dependent on local topographic, soil, and vegetation conditions to be successfully regulated through national limitations.[86] Furthermore, even if this were not the case, land use regulation has traditionally been considered the province of the States and, especially, the local governments. This is the reason why Congress, for six successive recent years, refused to pass the proposed Land Use and Resources Conservation Act[87] which would have provided Federal grants to the States for multiple-purpose land use planning and regulation.

State governments derive their powers from their State constitutions and the tenth amendment to the U.S. Constitution, which reserves to the States all the traditional, common-law powers not expressly granted to the Federal government. There is no question that the States have the power to enact water pollution control and a variety of types of land use regulations. This is the States' "police power", which permits them to regulate private activities for the protection of public safety, health and welfare. But the States' power (and therefore its local subdivisions' power) to regulate land use is also limited by certain provisions of the 14th Amendment to the Federal Constitution that protect private rights. These are (1) the provision that private property may not be "taken" for public use without just compensation *88

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* Whether a given land use regulation is sufficiently stringent to constitute a "taking" that requires compensation is a frequently litigated issue. The courts in different States have used different lines of reasoning, which has led to different rulings arising from similar regulations and fact situations. The most prevalent rule is that a land use regulation is considered a taking if it results in extreme reduction of the economic value of the land.

Recent court opinions dealing with environmental-land use legislation of the 1970's, however, indicate that the courts are no longer interpreting the taking clause to mean that elimination of commercial value by regulation always amounts to a taking. Indications are that the courts are less likely to invalidate a statute or ordinance if it is based on a considered judgment of both the rights of the property owner and the costs to the public of allowing the restricted land use to continue. The courts are also likely to insist that a valid regulation must be carefully drafted to avoid restricting activities that are not harmful. Furthermore, some commentators have noticed a definite tendency of the courts in the 1970's to approve land use regulations that are Statewide or regional, rather than local. See backnote 88.

and (2) the provision that all persons are entitled to equal protection of the law.

In addition to their police power to regulate land use, the States also have power to raise taxes and to condemn privately owned land for legitimate governmental purposes (including NPS pollution control) on payment of "just compensation". The States have delegated many of these powers to local governments of general jurisdiction, such as cities and counties. The States have also created special purpose governments, such as districts and regional authorities (both interstate and intrastate) and endowed them with the governmental powers necessary to carry out their functions.[89]

It has been rare until lately for State legislatures to regulate land use. Historically, most land use regulation has been at the local, not the State level, and has been regulation of building (zoning ordinances, building codes, subdivision regulations) not resources use.*[90,91] Although local governments frequently do not have all the regulatory (or the taxing) powers of the State, they are considered the appropriate level for deciding where residential, commercial, industrial and public facility development shall take place. This is because local governments are located in the neighborhood of the activity to be regulated and are highly responsive to the views of the individual citizens most directly affected by such regulations.

Since planning and regulating the location of new point sources of pollution is required by section 208(b)(2)(c)(ii), it is expected that means will be found to make use of existing local, building-oriented, land use regulations on an areawide basis. EPA's draft guidance materials for nonpoint source regulation point out ways that this can be done.[92]

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* A significant exception to this generalization is provided by the wind erosion control regulations of eight western soil and water conservation districts, six of them in Colorado. See note 91.

However, it is agreed that the States are the ultimate repository of land use regulatory powers. In many cases the States have already given the local governments of general jurisdiction the basic authorities necessary to impose nonpoint source pollution controls. In cases where they have not already done so, the States can now give the local governments such authority by State legislation or constitutional amendments. The States can also create special local or regional governments and endow them with authority to create and/or enforce nonpoint source controls. (The soil and water conservation districts, which help the farmer prepare, but on the whole do not enforce, farm soil erosion control plans, were created under State law). In some cases the States can use existing State level regulatory programs to accomplish the same purposes, or, if there are no such programs, enact legislation creating them.

This is the reason why EPA's Guidelines for State and Areawide Water Quality Management Program Development point out that it is EPA policy that "the type of regulation appropriate for each nonpoint source category should be established by the State." Designated 208 planning agencies may also propose nonpoint source regulatory measures for approval by the State.[93]

To carry out this policy, section 131.11(n) of the EPA regulations provides that each areawide water quality management plan must contain a description of the existing State-local regulatory program that will be used to implement it, including the statutory basis for the program, its administration and funding. The description must also include an identification of any additional State or local regulatory programs needed to implement the plan, together with a description of the needed legislation.

Furthermore, in order to expedite implementation of water quality management plans, section 131.11(n) also directs that 208 plan regulatory programs shall take full advantage of existing legislative authorities and administrative capabilities. Somewhat contradictorily, since existing construction-oriented regulations are still mainly local, section 131.11(n) also requires regulatory programs "to assure to the extent practicable that point and nonpoint source management shall be on a Statewide or areawide basis.[94]

Federal Agency Participation in Planning and Implementing Nonpoint Source Controls--Emphasis on USDA Participation

Both Public Law 92-500 and the November 1976 regulations envisioned that State and areawide local regulatory programs may be used to implement NPS control measures in the 208 plans. But establishment of such programs is dependent on State and local political processes. Furthermore it takes more than legal regulations to make regulatory programs effective. Consequently, the FWPCA (even before enactment of the Culver amendment) and EPA policy provided for Federal agency participation in both 208 planning and implementation.

Apart from EPA's own role in funding, assisting, and approving the 208 planning process, federal participation will be provided by both EPA and other Federal agencies under other Federal laws. Its purpose will be to make available to the 208 planning effort whatever possibilities for technical and financial assistance can be found in other Federal programs.

Thus, section 304(j) of Public Law 92-500[95] provides for an agreement between the Administrator of EPA and the Secretaries of Agriculture, the Army, and the Interior to provide for maximum use of the programs administered by the three departments to implement Section 208 plans. The resulting agreement[96] provides that in designated areawide planning areas, the planning agency must create an advisory committee and invite the three departments to participate in plan development by designating representatives. Each of the three departments may decide whether or not to participate, as it deems appropriate.

The interdepartmental agreement also provides, very pertinently, that EPA will coordinate with each of the three Secretaries to make sure that programs under the jurisdiction of the latter supplement or complement the implementation of approved section 208 plans. The agreement further provides that the three Secretaries may enter into agreements to implement provisions of approved 208 plans with the regional waste management agencies that will be designated to implement such plans.

The interdepartmental agreement also provides that when the 208 plans are approved, EPA may transfer funds appropriated for that purpose to the three departments. The fund transfers will be used to pay for accelerations and modifications in programs administered by the three departments that will be used to implement the 208 plans.

EPA's planning guidelines and regulations call for representation of "affected" Federal agencies on State policy advisory committees and for coordination of 208 plans with other Federally assisted planning programs.*[97] The guidelines also draw the attention of the State planning agency to the capability of Federal agency advisors to both technically assist the planning work and point out how their own programs can be used to implement the plan. They instruct the State planning agencies to obtain the advice of Federal land and water management agencies in the States containing Federal lands, and of the Forest Service, in States containing State or private forested land as well. They also draw attention to the Army Corps of Engineers' Urban Studies Program, which is concerned with wastewater management (including land treatment of sewage and land disposal of residuals) as well as stormwater management and treatment. In addition, the guidelines draw attention to the assistance available from several agencies of the Department of Agriculture. They point out that the Soil Conservation Service (SCS) can provide technical assistance in assessment and control of soil erosion as well as liaison with the soil and water conservation districts and methodology for involving those districts in water pollution control activities. The Agricultural Stabilization and Conservation Service (ASCS) is responsible for administering the agricultural conservation program, which can supply cost sharing assistance for many of the "best management practices" that may be needed to control pollution from runoff and sedimentation from farms.[98]

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* EPA has developed a number of interagency agreements and memoranda of understanding that integrate 208 planning efforts with other Federally assisted planning programs, so as to save time and avoid duplication of effort and expense. The other programs involved include EPA's own air quality maintenance area planning, HUD's 701 planning, coastal zone management programs, and the Corps of Engineers' areawide wastewater management planning. In addition, EPA regulations and guidance materials call for the State planning agency to make sure that State planning under sections 208 and 303 is coordinated with a large number of planning programs, including EPA's own clean air, solid waste and drinking water programs. See note 97

EPA's April 1977 draft Nonpoint-Source Strategy summarized the potential contribution of USDA by stating that EPA will place heavy reliance on USDA programs for:

(1) aid in identification and evaluation of agricultural nonpoint source problems,

(2) technical guidance in solving such problems, and

(3) direct assistance to landowners, including technical information, education and financial assistance.[99]

In early 1976, the Assistant Secretary for Conservation, Research and Education directed USDA to organize on the national and State levels under SCS leadership to advise and coordinate USDA agency input in the 208 planning effort. The Washington level 208 work group is chaired by SCS and includes representatives of the Forest Service (FS); ASCS; SEA-Extension; Agricultural Research; Cooperative Research (CR); and Farmers Home Administration (FmHA); Economics, Statistics, and Cooperatives Service (ESCS); Cooperative Research; and Rural Electrification Administration (REA). There is also a USDA 208 group in every State, all but two of them chaired by SCS, with membership including at least, FS, ASCS, and SEA-Extension (through the Cooperative Extension Service) in every State, and other agencies represented on the national work group in many of them.

In September 1977, the Secretary of Agriculture and Administrator of EPA signed a memorandum of working relationship to develop a model implementation plan (MIP).[100] The MIP effort is based on coordination and acceleration of the programs of 8 USDA organizations: ASCS, SCS, Extension, Agricultural Research, Cooperative Research, FS, FmHA, and ESCS for water quality purposes. Seven rural areas were chosen to demonstrate the effectiveness for 208 planning and implementation of field level programs concerned with research; education; technical, financial, and credit assistance and existing USDA cooperative arrangements with soil and water conservation districts and State agencies. Provision has been made to use ACP for cost sharing in the seven MIP project areas. In two of them, funding is also available from EPA under section 314 of the FWPCA (clean lake program) in one from SCS under the Great Plains Conservation Program and in some under small watershed program.[101]

Participation of USDA Action Agencies in the 208 Planning Effort

SCS has provided staff to almost 100 State and areawide 208 agencies through intergovernmental personnel agreements (IPA's). SCS and EPA have also made arrangements for SCS technical field staff to be assigned to every EPA regional office to work on 208 matters.[102] These matters include designing BMPs to control sediment and polluted runoff from agricultural activities (including animal concentrations and irrigation return flows), construction activities, and mines. In addition, SCS is making available the State technical guides it has developed for its regular conservation assistance programs. These guides describe many sediment and other pollution control practices that can be used as BMPs.[103]

SCS is also making soil surveys and their accompanying interpretive reports available (from the National Cooperative Soil Survey) for use in 208 planning efforts. These surveys, including land classification, maps, and interpretive reports, have been completed or are in process for virtually all rural counties (although many require updating) and for a growing number of urban areas. They can be used to show the location of soils that cause sediment problems when used for construction or crop culture, and pollution problem when used for feedlots, irrigated agriculture, sewage lagoons, or septic tank absorption fields.[104]

Other data resources that SCS can make available to 208 planning efforts include (1) hydraulic, soil sedimentation, and flood hazard information contained in water resource studies, (2) State conservation needs inventories outlining sedimentation and flooding problems of and proposed corrective treatment for lands that were cropland, pasture, or forestland in 1967, (3) information on plants that can be used in controlling sedimentation and (4) special reports on land use related pollution, such as saline pollution from irrigated agriculture in the Colorado basin.[105]

Participation of the Forest Service (FS) in section 208 planning has been formalized by a joint EPA-FS policy statement, which also provides for coordination of 208 planning with FS's own land use planning on national forest system land.[106]

The joint policy statement provides that State and areawide water quality management agencies shall involve Region, Area, and Forest Offices of FS in all stages of water quality management planning and implementation for forested land. This shall be done directly, where National Forest system lands are involved, and through the State Forester, where State or private forests are involved. The joint policy statement further provides that State and areawide planning agencies shall be encouraged to make cooperative agreements or more informal arrangements with the Forest Service and that State Forestry agencies shall be encouraged to make cooperative agreements with State planning agencies concerning Forest Service and water quality management planning agency coordination. These agreements are to provide for (1) water quality management planning and implementation on National Forest lands as required by Section 313 of Public Law 92-500,[107,108]* (2) exchange of data, (3) FS technical assistance to State and areawide agencies and State Foresters, and (4) participation of FS officers on State and areawide advisory groups.

In addition, FS offices agree to provide State and areawide planning agencies with advisory and contractual technical assistance, Intergovernmental Personnel Act transfers, and data. The data shall include water quality monitoring data, research information, and information developed for water resources studies.

The statement further states that it is Forest Service policy to pay for and execute the pollution control requirements of section 208 on National Forest system land through FS's own land use planning process and execution of specific projects. FS agrees to adjust its budget priorities and incorporate 208 planning and implementation efforts on National Forest Land into its own program planning and budgeting under the Forest and Rangeland Renewable Resources Act of 1974.

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* Section 313 originally required all agencies responsible for management of Federal lands or facilities to conform to the substantive requirements of Federal, State, interstate and local pollution control law. It has been amended to require compliance with procedural requirements as well. See note 107.

Another agency that has established procedural guidelines for its participation in the 208 program is the Agricultural Stabilization and Conservation Service (ASCS). In April 1976, ASCS and EPA signed a memorandum of guidance providing for cooperation and liaison on the State and local levels between ASCS farmer assistance programs and the 208 planning and implementation effort. The memorandum also provided that ASCS would make its county-level crop history, land use, aerial photography and cost-shared conservation practice information available to the planning effort.[109]*

ASCS assists farmer-elected ASC committees in about 3000 agricultural counties in administering payments to farmers for commodity support and voluntary production adjustments as well as installation of conservation practices. ASCS conservation programs consist of (1) the nationwide agricultural conservation program (ACP); (2) the forestry incentives program, consisting of two cost-shared practices in counties designated by Forest Service survey; and (3) the water bank program, providing payments for conservation of wetlands in selected areas of waterfowl habitat.[110]

In the ACP, the county ASC committees select practices for cost sharing from a comprehensive list that includes good farm management measures of other kinds as well as water quality management practices. County ASC committees also select cost sharing rates for practices (generally between 50 and 75 percent). Cost sharing is available under annual or long-term agreements of 3 to 10 years.

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* Cooperation has since been expanded by a new memorandum of understanding between ASCS and EPA signed July 1979, relating to the clean lakes program and to water quality research and evaluation as well as the 208 program.

Long term agreements are based on SCS developed conservation plans approved by the local soil and water conservation district. 111

In recent years, annual ACP appropriations legislation has contained a maximum cost-share limitation of $2,500 per farm, per year which has been raised to $3,500 in the appropriations legislation for fiscal 1979. 112 This annual payment limitation is criticized as making ACP payments an inadequate incentive for some expensive NPS management practices. For example, constructing storage pits on dairy farms in northern States (to remove the necessity of spreading manure on snow covered fields) may cost as much as $25,000 per farm but has often been observed to be cost effective in reducing NPS.

Before passage of the Culver Amendment, it was expected that ASCS programs, especially the ACP, would be the principal means to provide the public cost sharing needed by farmers to install the more expensive, "permanent" agricultural BMPs. The Culver Amendment has changed this expectation somewhat. In June 1978, the Secretary of Agriculture proposed regulations for a new rural clean water program (RCWP), led by SCS, that would use soil conservation districts, State soil and water conservation committees or State water quality agencies to administer distribution of cost sharing funds. 113 The proposed regulations provide that arrangements will be made with ASCS for ASC committees to administer RCWP projects when it is not practicable to enter agreements with districts and State agencies to do so. The proposed regulations do provide, however, that priorities for assistance to individual landowners and operators will be determined jointly by the soil conservation district of the project area and the county ASC committee.

However, no funds had been appropriated for RCWP, when this was written.

The April 1976 ASCS-EPA agreement provided that ASCS would contribute (1) current information from State and county ASCS offices to assist EPA in evaluating best management practices (such as costs of alternative land treatment measures), (2) and current information on rural and agricultural pollution problems. In addition, ASCS would make data available from its county offices. The data would include crop histories, conservation practice cost assistance histories, and aerial photomaps.*[114]

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* Each ASCS county office or agriculture department service center has a photo index of the county or counties it serves. The photomaps may then be ordered from ASCS's Aerial Photography Field Office (APFO). ASCS uses them to check compliance with various farm programs, but they are also available for purchase by other Federal agencies, State and local planning agencies, and private developers. In cases where public agencies want special photographs, such as pictures showing land conditions under different climatic conditions, cooperative agreements are made to share the costs.

APFO also has on file all relevant NASA satellite photo imagery. The usefulness of satellite imagery was demonstrated in an EPA sponsored pilot study of methodology for assessing rural nonpoint pollution sources by the Ohio-Kentucky-Indiana (OKI) Regional Council of Governments. The OKI runoff study used land-use map transparencies (derived from Landsat photos) overlayed on SCS Soil Survey maps in developing a model to identify the nature and severity of nonpoint pollution loads in rural watersheds. Although ASCS did not participate in the OKI study, the Landsat data, which was interpreted by the Cooperative Extension Service people, may have been obtained from AFPO.

ASCS conducted two pilot projects in 1976-77 to demonstrate use of its inputs, particularly aerial photographs and crop histories in 208 planning at the field level. In the Mobile, Alabama designated area, ASCS aerial photographs were used to substantiate information concerning urban, industrial, and transportation development; identify catchment basins for water sampling; and find the location of agriculture, forestry, wetlands, and drainage and sedimentation problems.[115] In Northeast Illinois, ASCS personnel coordinated development of a complete agricultural land use inventory using aerial photographs and other county office information. This inventory included erosion problem areas, conservation practices on the land, livestock concentrations and use of fertilizers and pesticides. It was based on interpretation of the photographs, ASCS crop data, personal information and information from other USDA agencies.[116]

SEA-Extension (formerly the Extension Service) is participating in State and areawide water quality management through its cooperative program with the 50-State extension services. SEA-Extension does not usually work directly with the farmers and other rural people who are its clientele but indirectly, by providing funding and program leadership, to the State extension services, also known, collectively or individually, as cooperative extension. The 50 State extension services are administered by State land-grant colleges and universities and financed by approximately 40 percent Federal, 30 percent State, and 30 percent local funds.[117]

Cooperative extension disseminates and demonstrates the practical application of selected significant research findings of USDA, State land-grant institutions, and other publicly supported research agencies concerning agriculture and natural resources, among other matters. Cooperative extension educational programs include explanation to farmers and other rural people of environmental regulations and their options in meeting them.[118] These programs can be used, after 208 plans are adopted, to explain to landowners and operators the purposes, advantages, and disadvantages of various BMPs. They are being used in the planning stage of the 208 effort to elicit the informed public participation required by section 101(e) for all planning under Public Law 92-500.[119]

Two areas in which USDA Extension has worked with the national level Extension Committee on Organization and Policy (ECOP), regional ECOPs, and State extension services are animal waste management and minimum tillage. In the case of animal waste management, State extension services have been engaged in demonstrations of various control methods since the mid-1960s and in educating livestock men on State regulatory programs since about 1970.[120] They are therefore qualified to participate in the technical design of whatever new regulations are required by Public Law 92-500 and to make sure livestockmen and feedlot owners are aware of them. In the past few years, Washington-level Extension served on a USDA interagency committee which advised EPA, on the development of feasible and practicable waste management guidelines for feedlots in the permit program.[121] In addition, the State extension services of six Great Plains States have produced a handbook outlining methods of waste management for all feedlots, whether included in the permit program or not.[122]

Cooperative extension work on minimum or no tillage, stuble mulch, and similar tillage systems can be used to inform farmers of ways in which they can conform to sediment control standards without economic loss. By November 1976, 25 State extension services had reported the use of demonstrations, meetings, publications, and tours to educate farmers in advantages and disadvantages involved in various minimum tillage methods on soybeans, corn, wheat, and other crops.[123]

Other areas related to agricultural NPS control in which cooperative extension is currently conducting demonstrations or education programs in cooperation with other USDA and State organizations include land disposal of animal wastes and sewage sludge, septic tank problems, solid waste problems, pesticide management, nutrient pollution of groundwater, rates of fertilizer application, and agricultural and urban sediment control problems.[124]

USDA's lending agency, the Farmers Home Administration (FmHA) is coordinating its numerous farmer, housing, and community programs with the section 208 water quality management effort. FmHA officials consider that its present efforts assist control of rural point sources (through water and waste disposal loans and grants, emergency livestock loans, and irrigation loans) and nonagricultural nonpoint sources such as septic tanks (through housing loans).

In addition it is expected that FmHA's program of real estate loans to individuals for soil and water conservation and development, and loans to associations and groups for irrigation, drainage and soil conservation measures (such as terraces and shelterbelts) will be used to help finance some nonpoint source BMPs required by water quality management plans.[125]

USDA Research Agencies Contributions

Agricultural Research* of the Science and Education Administration is USDA's principal in-house scientific research organization. FR has an program of Soil, Water, and Air Sciences Research (SWAS). SWAS is primarily oriented toward development of cultural practices and cropping systems that will provide efficient sustained use of natural resources. But it is also applicable, in many cases to water quality management. FR is currently undertaking to provide Section 208 agencies with applicable data from this program and interpretation of such data and to develop and test predictive models to assist planners in their nonpoint pollution assessment function.[126]

The principal AR contribution, as of this writing, to the Section 208 planning effort is Control of Water Pollution from Cropland, Vol. I, a manual for use in local development of best management practices for nonirrigated cropland.[127] Volume I breaks down the 48 contiguous United States into 156 Land Resource Areas (LRAs). Using existing information, it estimates potential direct runoff, erosion, and percolation as well as major crops, and use of fertilizers, animal wastes, and pesticides on crops, for each LRA. It also analyzes the advantages and disadvantages of alternative cropping systems, tillage practices, and nutrient and pesticide application systems that can be used to lessen sedimentation and pollutant runoff.

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* Until USDA was reorganized in early 1978, AR was a separate agency, the Agricultural Research Service.

In addition, the manual discusses economic considerations that should be used in determining a desirable level of pollution control, desirable types of control practices and a method of economic analyses for final selection of BMPs.[128] (The economic aspects of the manual were written by the Economics, Statistics, and Cooperatives Service).

The manual states that its most effective use will be as a guide for local development of specific BMPs for specific areas. It recommends that State planning agencies, soil conservation districts or other agencies (such as areawide planning agencies) appoint mixed groups of farmers and technical specialists, familiar with the area, to develop the BMPs.[129]

Section 208(b)(2)(F) requires each water quality management plan to include (1) "A process to identify" agriculturally related nonpoint sources of pollution from cropland, and (2) procedures to control such sources. The method of identifying pollution problems by land area and crop and selecting suitable BMP for each local problem, which is outlined in the manual, can be used to fulfill this statutory requirement. It is, of course, only one of the methods that can be used for this purpose.

The second volume of the AR report, subtitled, "an overview" mainly provides the background methodology from which the conclusions used in the manual were reached, but it also provides additional detail for use in applying the method to still more specific problem areas.[130]

The 1978 SWAS annual report shows that five out of 12 current continuing research program areas are strongly related to the development of agricultural and rural land management practices that lessen water pollution. These are:

NRP 20730. Reduction of salt damage to crops, soils and waters.[131]

NRP 20770. Reclamation and revegetation of land areas disturbed by man.[132]

NRP 20790. Preventing pollution of land and improving the quality of soil, water and air.[133]

NRP 20800. Control of water erosion, wind erosion and sedimentation.[134]

NRP 20810. Conservation and management of agricultural water resources.[135]

NRP 20790 and 20800 are particularly focussed on studies that can be used in the assessment of nonpoint pollution and evaluation of alternative management practices required for 208 planning. NRP 20790 includes studies relating to pollution from agricultural chemicals, sedimentation, saline return flows and land application of municipal sewage sludge or effluent and other wastes. Past research in this area has developed guidelines for effective management and use of animal wastes. NRP 20800 includes studies adapting the universal soil loss equation for use in relation to specific geographic areas, types of crop and topographic features and studies of the effects of various conservation tillage systems on runoff and erosion. NRP 20810 includes studies leading to development of procedures for evaluating the impact of watershed and river basin management systems on agricultural NPS pollution.

Similar studies, on other aspects of the same problems are being carried out at numerous State agricultural experiment stations. These land grant college installations receive grants from Cooperative Research, another unit of the Science and Education Administration, for approved programs of research on agriculture-related subjects including agricultural pollution. The State Agriculture Experiment Stations have also received funding from EPA for numerous studies relating to agricultural nonpoint sources. An important example is a Louisiana Tech University report recommending methods for use in control of environmental problems associated with production of animals on pasture or range.[136]

The Forest Service is another USDA agency whose regular research program, including both scientific and social scientific research, deals with protection of water quality, among other matters. EPA has entered two interagency agreements with FS, making funds available to FS to review, analyze, and evaluate its research findings and operational experience for use in the 208 planning effort. One is for use in preparing the 208 nonpoint pollution assessment for forested lands.[137] The other is for use in selection of silvicultural BMPs.[138]

Reports published under these agreements include:

(1) Nonpoint Water Quality, Modeling in Wildlife Management.[139] This is a two volume report that reviews forestry management activities that increase NPS pollution and the effectiveness of demonstrated control techniques to reduce this potential. It also evaluates the usefulness and reliability of existing NPS loading models in planning effective forestland NPS controls and evaluates the water quality data base available for model development and testing.

(2) Silvicultural Activities and Nonpoint Pollution Abatement: A Cost-Effectiveness Analysis Procedure.[140]

In addition, a handbook providing the technical basis for formulating silvicultural BMPs has been developed and will soon be published.[141] This handbook lists control practices and provides a methodology to select mixtures of these controls to prevent and mitigate NPS pollution from silvicultural activities. It does not attempt to analyze the economic, social and political aspects of various controls.

FS has also completed a document assessing short-term and long-term research needs for in-house use by EPA's Office of Research and Development. Research areas analyzed in this report include (1) on-site control technology, (2) techniques for predicting pollutant transport, and (3) socio-economic-institutional aspects of implementing controls.[142]

FS's State and Private Forestry personnel have produced a report containing a nationwide survey of laws, ordinances, and regulations applying to streambed management zones on State and private land.[143]

The Economics component* of the Economics, Statistics, and Cooperatives Service (ESCS) is another USDA organization that performs research which can be used in preparing management plans for agricultural nonpoint sources (as well as other rural nonpoint sources and agricultural point sources).

Section 208(b)(2)(E) requires an assessment of the costs and economic impact of carrying out areawide plans within the planned time frame.[144] In many areas, much of the local economic information needed for this assessment can be made available from ESCS's river basin planning assistance program. This program is the Agency's contribution to two types of comprehensive river basin plans (1) cooperative plans*(formerly known as Type IV) and (2) level B plans. ESCS's contribution consists of appraisals of trends of water and land use; projections of agricultural production, employment, income and rural population; and analysis of the economic impact of erosion and sedimentation and other water and related land resources problems.[145,146]

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* Until 1978 this was a separate agency, the Economic Research Service.

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* Cooperative studies are performed together with SCS and FS at the request of and with the cooperation of the State or, in a few instances, another Federal agency, and concern rural, but not necessarily small, areas. Presently ERS is participating in about 35 cooperative plans and about 59 others have been completed, many of them fairly recently.

Level B studies are federally coordinated interagency, intergovernmental studies involving, in addition to SCS and FS, other Federal agencies, such as the Corps of Engineers, EPA, Fish and Wildlife Service, Bureau of Outdoor Recreation and others, and State agencies as well. Level B Studies are for regions and river basins with complex, long-range water and related land resource problems, including, in many cases complex pollution control problems. Only a few of these studies are currently underway or have recently been completed. See note 145.

However, Section 209 of Public Law 92-500 directs the President to complete level B studies for all the rivers of the Nation by the end of 1979 and specifies that priority be given to areas where section 208 planning is being conducted by designated area planning agencies. See note 146. It seems clear that the statutory date for completion of 209 plans will not be met.

In many instances economic information usable in 208 plans can be regarded as a by-product of ESCS river basin studies. However, in recent and current studies, ESCS has been deliberately tailoring its work to be useful to 208 planners. Thus, in the Iowa-Cedar River basin, a study was made of the costs of reducing agriculturally caused sedimentation to various selected levels by using various management practices.[147]

ESCS is also studying the economics of controlling agricultural nonpoint source pollution in the Corn Belt. These studies will show the economic, environmental and institutional effects of imposing selected regulations or adopting selective management practices that effectively reduce the delivery of nonpoint source pollutants. Studies in California will show the effects of controlling nitrogen and salinity levels from irrigation return flows.

Other ESCS studies that can provide information required to be included in areawide water quality management plans concern economic and institutional aspects of land disposal of sewage effluents and sludges.[148]

Several studies applicable to 208 planning are being supported by EPA. In New York State, ESCS is participating with the State College of Agriculture and Life Sciences in two studies funded by EPA, in one case through the New York Department of Environmental Conservation. One of these studies concern development of BMPs for New York State. The other concerns evaluation of soil and water conservation practices applicable to nonirrigated agriculture in the Eastern States.

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* ESCS representatives are participating in the second study as members of an expert panel, which represents all the USDA agencies participating in the 208 working group and several State colleges of agriculture.

The latter study will examine critically the assumption that erosion has a direct effect on water quality. It will examine both the water quality effects and the cost effectiveness for water quality of specific soil and water conservation practices, including the trade-offs between them. For example, it will inquire whether more pesticides are needed when minimum tillage methods are used and with what consequences.[149]

Current EPA Requirements for Implementation of Nonpoint Source Pollution Controls

In September 1977, EPA issued a final program guidance memorandum establishing implementation criteria for EPA approval of NPS elements of water quality management plans.[150] This memorandum, SAM-31, states that NPS regulatory programs will be required whenever the 208 agency, in consultation with the EPA Regional Administrator (RA), determines that a regulatory program is "the only practicable method" to assure that NPS controls are implemented. Such determination is required to be based on economic, technical, social and environmental factors.[151] SAM-31, does not go so far as to say that all 208 plans for areas with significant NPS problems must contain NPS regulatory programs however.

SAM-31 states that the type of regulatory program and appropriate level of government to administer it (State, local or regional) shall depend on existing laws, programs, and intergovernmental relationships. In cases where such existing institutions are not capable of providing effective NPS controls, however, RAs are directed to condition EPA approval of 208 plans on the development of appropriate changes in legislative authorities or administrative capabilities.[152]

Fully approvable NPS regulatory programs are required to include the following elements:

- Authority to control the activity, pollutant or geographical area to be regulated.
- Authority to require application of BMP.
- Monitoring and/or inspection authority.
- Authority to use the chosen control tools. (plans, permits, licenses, contracts, notifications, and bonding are among the examples given.)
- Enforcement authority.
- A designated management agency to implement the program (with expertise in the subject matter area, adequate staff, adequate funding and relevant legislative authorities).[153]

Conditional approval of proposed NPS regulatory programs may be granted in cases where adequate legislative authority exists but administrative machinery to implement it is lacking or inadequate or where adequate legislation has been developed and is either introduced (but not enacted) or scheduled for introduction. But conditional approval may only be granted where an agreement is executed between the RA and the planning agency specifying the conditions for full approval and a schedule for meeting them. Such agreement must require periodic (at least annual) progress reports, and RAs are directed to withdraw conditional approval if they find the agreed to progress is not being made.[154]

SAM-31 also provides that RAs may grant approval of NPS control programs without enforcement provisions or fully authorized management agencies only where they are convinced that such nonregulatory programs will result in sufficient implementation of NPS controls to achieve water quality goals. Approvable "other than regulatory" NPS control programs are required to include the following elements:

- Identification of BMP.
- Effective educational program.
- Adequate technical and financial assistance.
- Schedule of milestones for resource commitment, implementation measures, monitoring, and progress evaluation.
- Progress reporting (at least annual).[155]

Nonregulatory programs that merely continue existing programs that have not been successful in the past, without substantial changes, are not approvable. Moreover, approval of nonregulatory programs shall be withdrawn if progress reports do not show continuing and substantial improvements.[156]

EPA criteria for approval of NPS control programs thus show very clearly that the Agency is aware that the multilevel political struggle required to make changes in regional land use management will be difficult and will take a long time. The memorandum directs RAs to provide necessary technical assistance to State and local planning agencies to assure that effective programs are developed and implemented. It also directs them to work closely with both legislative and executive decision-makers at the State and local levels to develop regulatory programs where required.[157]

RAs are directed to assure that development of regulatory programs is part of the continuing 208 planning process* by writing schedules of milestones into the 208 grant agreements and/or work plans. The actual milestones should be negotiated between the RA and the planning agency to resolve any potential EPA objections to the proposed program in advance of development. But the following list of specific program milestones is suggested.

(a) Completion of phases in water quality assessment of NPS pollution impacts.

(b) Identification of NPS problems.

(c) Identification of needs for legislation.

(d) Certification from State attorney general or local legal agency that adequate legal authority exists.

(e) Proposal of legislation.

(f) Enactment of legislation.

(g) Proposal of new or upgraded rules and regulations.

(h) Promulgation of rules and regulations.

(i) Establishment or identification of insitutions necessary to administer the program.

(j) Establishment of interagency and intergovernmental coordination mechanisms.

(k) Establishment of monitoring, inspection and enforcement procedures.

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* We have noted that Section 208(b)(1) provides for a continuing planning process as well as an initial areawide plan. EPA grant applications for initial plans require that the plans be updated annually and become financially self-sustaining once they are approved by EPA and adopted by the State.

(l) Provisions of funds, personnel, facilities and equipment for regulatory objectives.

(m) Development and implementation of educational programs in support of regulatory objectives.

(n) Development of public participation programs.

(o) Assessment of adequacy of Best Management Practices.[158]

SAM-31 also states that the RA shall have authority under grant agreements to withhold funds if milestones are not being met.[159]

SAM-31 thus agrees with EPA's planning regulations, guidelines, and criteria for approval of nonpoint source programs that 208 planning agencies should use existing laws and programs to implement 208 plans "to the extent practicable" and avoid the difficult task of designing and establishing new ones. We have already discussed Federal programs that can be used in planning and implementing agricultural NPS control programs. The remainder of this report will analyze the capability for agricultural NPS control implementation of existing State and local laws and programs.[160,161,162]*

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* In preparing the remainder of this report I have begun with information contained in two studies conducted by the National Association of Conservation Districts (NACD) concerning the potential contribution of conservation districts to 208 planning and implementation. One study, the NACD 208 Water Quality Project, (see note 160) includes copies and analyses of all State-level sediment control laws, including those that do not apply to agricultural operations. It also includes copies and analyses of actual and proposed

Conservation District NPS Control Authorities

Under Soil Conservation District Laws

All of the 50 States, the Virgin Islands and Puerto Rico have statutes enabling the creation of special-purpose local governments called "soil conservation districts", "soil and water conservation districts" or simply "conservation districts." All the statutes resemble each other. They were originally passed in the late 1930's or early 1940's in response to the serious wind and water erosion problems of that time. They were all based on a 1936 Standard State Soil Conservation District Law developed and proposed to the States by USDA to provide the responsible State and local cooperation required by SCS's new program of soil conservation improvements on private land.[164,165] Some of these laws were subsequently amended to emphasize other soil erosion related concerns such as flood prevention and land use planning.[166]

(footnote continued)

conservation district sediment control ordinances, intergovernmental and interagency agreements providing for conservation district participation in the 208 planning processes, and charts showing the potential capabilities of conservation districts for various levels of NPS controls planning and implementation. A guidebook for district participation in the 208 planning and implementation processes has also been developed, as part of this project. See note 161.

The other NACD study, the Sediment Control and Manpower Project consists of in-depth analyses of legal and administrative capabilities of the sediment control programs of six States and some of their potential subdivisions. See note 162.

An unpublished 1971 manuscript by W.D. Anderson is the starting point of my research into State conservation district enabling laws. See note 163.

Nonregulatory Powers--Capability of Districts to Act as Management Agencies for "Other than Regulatory Programs"

Some State enabling statutes delegate regulatory powers to the districts; some do not. The nonregulatory powers delegated to districts by State statutes are very similar.[167] Virtually all State statutes authorize districts to study resources needs and problems, develop conservation plans for soil resources of the district, educate land occupiers about the plans and offer land occupiers technical advice and services, financial assistance, and other assistance (including machinery, equipment, fertilizers and seeds) for the installation of conservation practices on private land. Statutes authorize districts to conduct demonstration projects and carry out soil and water protecting "preventive and control measures" on private land. Such measures are defined to include engineering operations, growing of vegetation, methods of cultivation and changes in land use.

State conservation district laws permit districts to require land occupiers (as a condition of receiving benefits and services from districts) to enter and perform agreements to carry out conservation practices or farm conservation plans. But State laws provide no penalties for failure of land operators to carry out such "cooperative agreements." Although it is probable that districts could obtain court orders for specific performance of such agreements as contracts, districts have not sought to do so because of their emphasis on the voluntary nature of their programs.

State district laws also authorize districts to own land and interests in land and carry out preventive and control measures on their own land, or land owned by the State or its subdivisions. District laws authorize districts to receive financial and other assistance from Federal, State, and local governments and to take over any Federal, State, or local government conservation or erosion control project by purchase, lease, or otherwise, and manage any such projects.

Procedurally, assistance is provided to districts by Federal and State agencies, and district programs are coordinated with programs of other levels of government through "memoranda of understanding" and other similar documents. An umbrella memoranda of understanding is executed between each district and USDA, outlining the assistance to be provided and the conditions that must be met to receive it. Supplemental memoranda are developed between each district and each USDA agency cooperating with the district.[168]

Every district has a memorandum with SCS, the only USDA agency that receives appropriations earmarked for direct assistance to districts. Under these memoranda, SCS generally agrees to furnish each district with the services of a professional conservationist specially assigned to the district, other personnel qualified to carry out resource planning, conservation and development activities, and facilities for their use.[169]

Most districts also have a memorandum with the county ASC committee. Under these memoranda county committees generally agree to take district long-range objectives and annual work plans into consideration in developing county ASC programs, inform district cooperators of the availability of ACP cost sharing for installing practices that may be included in their conservation plans, and give priority to providing cost sharing for installing practices required for specified district priority programs. In addition districts generally agree to participate in the development of county ACP programs. Memoranda of understanding between districts and county committees frequently specify that cost sharing priority be given to land in RC&D and watershed projects.[170] There is no apparent reason why similar arrangements could not be made giving cost sharing priority to lands found to be causing NPS problems in areawide water quality management studies.

A new set of memoranda of understanding is likely to be drawn up as a result of the Culver amendment[171] which provides that the Secretary of Agriculture shall make arrangements with districts (where practicable) to administer programs of long term contracts to install and maintain agricultural BMPs included in approved 208 plans. The Secretary has proposed regulations for a rural clean water program (RCWP) to carry out the Culver Amendment[172] which delegates to SCS responsibility to make arrangements with districts to administer such contracts. SCS has published a RCWP procedural manual to provide specific guidance about the RCWP. Other types of arrangements with relevance to agricultural NPS control can be made between districts and AR, FmHA, State extension services, ESCS and other Federal and State agencies.[173]

It thus appears that conservation districts have ample authority to act as management agencies for "other than regulatory" NPS control programs featuring identification of BMP, educational programs, and technical and financial assistance on the basis of their own powers and their authority to receive assistance from other government entities.

Regulatory Powers in the Standard Act

The nonregulatory powers discussed above are all included in the 1936 Standard State Conservation District Act and were adopted in nearly identical form in nearly all State statutes. But the Standard Act also gave districts the power to promulgate land use regulations in the form of enforceable conservation ordinances. This power is now included in only 26 States' enabling statutes (usually in restricted form) and has been very seldom used.[174]

Section 9 of the Standard Act authorizes district supervisors to formulate proposed ordinances (with the assistance of public meetings, if they choose) and submit such proposed ordinances to a referendum of the land occupiers of the district. Copies of the proposed ordinance or adequate notice of its contents must be made available to eligible voters prior to the referendum. All occupiers of land within the district (whether or not they have cooperative agreements with the district) are eligible voters. If a majority of the votes cast is for approval, the supervisors are authorized to enact the ordinance, but are not required to do so.

Section 9 also provides that an ordinance can be amended or repealed by the same procedure used for adoption, but that referenda on adoption, amendment, or repeal of land use ordinances can not be held more often than once every 6 months.

Section 9 provides that land use regulations in district ordinances must be uniform throughout the district, except when land is classified on the basis of "soil type, degree of slope, degree of erosion treatment, or existing cropping and tillage practices in use, and other relevant factors." In such case land use regulations must be uniform for each class of land.

The suggested regulatory provisions are:

(1) Provisions requiring the carrying out of necessary engineering operations, including the construction of terraces, terrace outlets, check dams, dikes, ponds, ditches, and other necessary structures;

(2) Provisions requiring observance of particular methods of cultivation including contour cultivating, contour furrowing, lister furrowing, sowing, planting, strip cropping, seeding, and planting of lands to water-conserving and erosion-preventing plants, trees and grasses, forestation, and reforestation;

(3) Specifications of cropping programs and tillage practices to be observed;

(4) Provisions requiring the retirement from cultivation of highly erosive areas or of areas on which erosion may not be adequately controlled if cultivation is carried on;

(5) Provisions for such other means, measures, operations, and programs as may assist conservation of soil resources and prevent or control soil erosion in the district.

There is no provision in the Standard Act that the land occupier's obligation to install conservation practices conforming to land use ordinances is conditioned on the availability of cost-share assistance, from any source, or adequate technical assistance from the district. (This has been considered to be a reason why few districts have adopted land use regulations.[175]) But there is no reason why individual district ordinances cannot contain such conditions.

Standard Act enforcement procedures authorize the supervisors to enter any land in the district, on their own initiative, to determine whether the land-use regulations in ordinances are being observed. Violators can be prosecuted for a misdemeanor and fined by the court. In addition, land-use ordinances can be drawn up to provide that any land occupier who is damaged by violation of an ordinance can sue to recover damages from the violator.[176]

In a separate section, the supervisors are given standing to ask the State court of original jurisdiction for what amounts to a mandatory injunction that the violator perform the work required by the regulations in the ordinance. This section provides that the supervisors may petition the court, setting forth their case against the violator and requesting that he perform the work, operations or avoidances required by the regulations within a reasonable time. The petition shall also ask that the court order specify that if the defendant fails to obey the court order, the supervisors may enter the land, perform the work, or otherwise bring the land into compliance and recover the costs and expenses of changes. This can be done, if necessary, by making the supervisors bill for costs and expenses a judgment against the land, to be collected in the same manner as general real estate taxes. (If the land occupier is not a landowner, the owner can be joined as a party defendant to bring the land under the jurisdiction of the court[177]).

It is important to note that this section authorizes, but does not require, the court to compel performance of its order by ordering that the district go on the land and do the work.[178] This means that section 11 does not deprive the court of its inherent power to enforce its court order against a recalcitrant defendant by putting him in jail for contempt of court until he agrees to comply.

The Standard Act also provides for a board of adjustment (appointed by the State soil conservation agency, with the approval of the supervisors) in order to prevent hardship. Any land occupier can petition for a variance from the regulations on the grounds of unnecessary hardship or great practical difficulty. The petition shall be the subject of a hearing at which the supervisors and the State soil conservation agency can appear and be heard, and land occupiers objecting to the variance can intervene and become parties. Judicial review is available from orders of the board of adjustment granting or denying the relief sought.[179]

Regulatory powers in State conservation district laws

Currently 26 State statutes give districts the authority to adopt land use ordinances.[180] All of these, except the New Jersey statute,*[181] require a referendum prior to adoption of an ordinance. But a majority do not follow the provisions of the Standard Act concerning eligibility to vote in the referendum. In the Standard Act, land occupiers, whether owners or nonowners, were eligible to vote. Eight States follow this provision,[182] but in 17 of the other 18 States only landowners may vote.[183] In Wyoming both the land occupier and absentee owner may vote.

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* The New Jersey statute authorizes supervisors to draft and post regulations which become law unless the owners of 25 percent of the land acreage in the district file objections within 60 days of the posting.

Some observers have suggested that a major obstacle to enactment of regulations is the high percentage of supporting votes required by various State statutes.[184]* The range is from 50 percent plus one vote to 90 percent of those voting.[185]** This means that in Maryland, where land occupiers are eligible to vote in the referendum and a simple majority is required, a district ordinance mandating agricultural sediment control practices could be put on the general election ballot in November and would not be more difficult to pass than a school bond (providing that the local public was as convinced such practices were necessary). But in Kentucky, where only land owners may vote and the required 90 percent supporting vote must represent the ownership of 80 percent of the acreage of the district, passage of such an ordinance would be impossible in almost any circumstance.

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* A different problem is posed by the fact that adoption of land use ordinances is conditioned on the percentage of supporting votes actually cast, not of eligible voters. This means that especially in landowner States (where the district would have to arrange and publicize special elections restricted to landowners), that referenda could be passed and ordinances enacted on the basis of very few votes.

** In six States the supporting votes must also represent the ownership of a specified proportion of the acreage in the district. This proportion is more than 50 percent in Oregon and Vermont and two-thirds in Mississippi. In Wyoming the required 75 percent of favorable votes cast must also represent 75 percent of the acreage. The case of New Jersey is discussed in a previous footnote.

Eighteen States provide for the establishment of a board of adjustment.[186] Of these, four specify that landowners may petition for a variance[187] but 14 provide, as did the Standard Act, that land occupiers may petition.[188]

The enforcement provisions in the State statutes appear to be somewhat weaker than the Standard Act. Only one State, Utah, still makes violation of land use ordinances a misdemeanor[189,190*] Another, Wisconsin, provides that the county shall prescribe "administrative procedures" for enforcement of regulations, which may include fines.[191] (The penalty specified in Section 10 of the Standard Act for the misdemeanor of violating the ordinance is a fine.) Only 11 provide that district ordinances may provide for civil liability of the violator to neighbors who are damaged by his violation.[192]*

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* Anderson found, as recently as 1970, that five States had this provision. It seems likely that the States that repealed the provision for criminal liability did so on bases similar to the reasoning of the Colorado Supreme Court in the Olinger case, which will be discussed later. See note 190.

On the other hand, all 26 State statutes permit the supervisors to enter on the land and inspect for violations on their own initiative. All except one, Nebraska, authorize the supervisors to petition for an order to compel performances of practices mandated by district ordinance. All but two, Nebraska and Vermont, authorize the supervisors to include in the petition for a court order a provision for the district itself to perform the practices and recover its costs and expenses if the land occupier refuses to obey the court order.** To this the Virginia Statute adds the qualification that the land occupier must be financially able to pay and that "if it would be a burden upon him" the "costs and expenses shall be borne by the party performing the work or be paid from funds received from some other source or sources."[193]

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* Since the State statutes follow the Standard Act in providing that district ordinances "shall have the force and effect of law in said district," it seems likely that in many of the States a neighbor who suffers sediment damage as a result of his neighbor's violation of such an ordinance can sue him and recover on the grounds of negligence per se, although authorities are divided. However, neighbors are probably more likely to sue their neighbors for neglect of erosion control practices when their right to do so is spelled out in the district ordinance.

** The Standard Act authorizes the supervisors to enter the land to perform "avoidances" as well as "work" and "operations" ordered by the court and the 26 State laws have similar provisions. But the backup authority of the supervisors is probably more useful in cases where sediment control requires construction of devices, such as terraces and diversions or planting of grasses and trees, than in cases where it could be adequately achieved by adopting a conservation tillage system, for example. In the latter case, the court's power to imprison a defendant who refuses to comply with its order for contempt of court could be used to enforce compliance, if necessary.

Although Virginia is the only State that has this provision in the statute, it is difficult to believe that conservation districts composed of farmers in any State would require farmers to install expensive erosion control measures unless public funds were made available to pay at least some of the cost. The only exceptions that come readily to mind are dust bowl-like situations (where farmers who fail to prevent soil erosion are causing serious damage to their neighbors lands) or cases where neglect of NPS pollution control is causing a public health menance or other very serious problems in the locality.

What is the signficance of the regulatory provisions in State conservation district laws for establishing the agricultural NPS regulatory programs expected to be required (for at least some areas) by 208 planning agencies? It appears that in 25 of the 26 States that have such provisions, conservation districts not only have expertise and subject matter jurisdiction to deal with at least sediment-borne NPS pollution problems, but authority to establish enforcement programs,*[194]providing they are willing to do so. The only respect in which conservation districts may be unable to meet EPA criteria for management agencies of sediment control regulatory programs is their funding. Funding for cost sharing expensive agricultural BMPs is expected to be provided from USDA and, in a few cases, State cost sharing programs.*[195] The actual drawing up of farm conservation plans incorporating BMPs can be done by SCS personnel as part of SCS's regular program of conservation assistance to districts. But provision will be needed for the additional funds and (especially) staff required for the standards setting, inspection, hearing, and notices involved in a regulatory program. NACD has prepared a manpower planning procedure and a national estimate of the State agency and conservation district manpower that would be needed if all States enacted legislation for controlling sediment and related nonpoint pollution.[196]

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* Nebraska is the only one of the 26 States whose district enabling law gives districts authority to pass land use regulations that cannot be enforced with respect to private lands. It provides that land use ordinances shall have the force and effect of law on State, county, and other publicly owned lands and be binding on public agencies only. It also gives the supervisors authority to go on public land, without court order, and bring the land into compliance. See note 194.

The Standard Act and most State acts give the districts themselves no money-raising authorities, because the Standard Act contemplated that all district operators would be funded from State appropriations for districts and Federal contributions (chiefly through the Soil Conservation Service).[197] NACD estimates that current appropriations for district operating expenses from State and local sources amount to about $116 million a year.[198]

It is not known how much of this is State and how much local funding. Glick, when he was General Council of NACD in 1967, complained that State appropriations for district operations were usually limited to funds for administrative housekeeping and were usually inadequate at that.[199] However, a number of the States that adopted the Statewide sediment control programs that will be discussed later in this paper have made larger appropriations to the districts and/or the State conservation agencies to enable them to hire staff to carry out the programs.[200]

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* When this was written only four States--Iowa, Minnesota, Nebraska and Wisconsin--had appropriated any funds for such cost sharing. Iowa is the only one of these States that has a statewide regulatory program. See note 195.

A few State district enabling acts give the districts authority to recommend an assessment on lands within the district to the county board of supervisors or a designated court.[201] Others give the districts authority to determine the assessment themselves and have the counties carry it out as part of the county taxing process.[202] A few have authorized the districts to issue bonds or otherwise borrow money.[203]

No search has been made in the county laws of the 50 States for provisions authorizing counties to finance district operations. But examination of the financial resources available to known State and district NPS control programs show that county supervisors are authorized to and do appropriate money for district operations in New York (which will be discussed later) and Wisconsin.[204] It seems reasonable to believe this must also be the case in at least some other States.

Assuming that adequate funding is made available for both district management agency operations and cost sharing for installing pollution control measures on private lands, there are two major drawbacks to using conservation district ordinances for regulation of agricultural NPS pollution. One is that, although EPA regulations have made the State responsible for most NPS control planning for rural areas, decisions to use district ordinances to establish NPS regulatory programs cannot be made at the State level. In each individual case they must be made at the district level by at least a majority (in most States a larger proportion than that) of those whose activities are to be regulated.

Some decisions can be made at the State level that might result in use of conservation district ordinances for agricultural NPS control. One would be for the State legislature to appropriate funds for district NPS regulatory program operations or for cost-sharing for agricultural NPS control measures. Another would be for the legislature to amend the State conservation district law to make district ordinances useful instruments for dealing with a variety of types of agricultural NPS problems (which leads us to the second drawback of district ordinances as regulatory instruments).

The second drawback to use of district regulations for agricultural NPS control is that the Standard Act and the State acts do not give the districts clear authority to make regulations requiring performance of BMP not directly related to soil erosion control, such as winter storage of manure, timing of fertilizer application, and restraint in pesticide use. In areas where pollution from runoff rather than sediment is the problem, the declaration of policy in State acts would have to be changed to provide a legal basis for regulating agricultural pollution from nonpoint sources other than soil erosion. It would also be advisable to amend the majority of State act regulatory provisions that include a list of suggested regulations. Regulations dealing with animal wastes, fertilizers and pesticides should be added to this list.

Neither State appropriations for conservation district NPS regulatory programs nor State legislation broadening the scope of district regulatory powers would give State planning agencies as much control over agricultural NPS problems as the enactment of broad scope Statewide regulatory programs.

But it might be easier, in some cases, to attract the political support required to make these lesser changes in State agricultural and land use programs.

Moreover, regulatory programs initiated by district supervisors and approved by referendum may be more acceptable to farmers in the district and may be pursued with more dedication by district officials than State initiated programs. This latter point is significant because all existing and proposed Statewide regulatory programs rely on the districts to administer them or at least to identify pollution problems, prescribe BMP and identify violations thereof.

District use of regulatory powers. Since the decision to use existing district regulatory powers is made at the district level, it is difficult to find information on how many districts have current conservation ordinances. Glick, in 1967, believed that only eight districts still had such ordinances,[205] (there had been more during the dust bowl years.[206]) Six of the district ordinances still in effect in 1967 were in Colorado, one was in North Dakota and one in Oregon. All the ordinances related to wind erosion control practices and all were enacted in the 1930's and 1940's.[207]

Colorado, a State in which only landowners may vote in district referenda, is the only State that has had substantial experience with district ordinances. It is also the only State in which the courts and legislature have addressed the question of the constitutionality of such ordinances.

The 1959 Colorado Supreme Court case of Olinger v. People[208] involved the violation of a dust bowl era ordinance (reenacted in 1945) prohibiting the breaking of virgin sod for cultivation. Olinger appealed on the ground that the land use ordinance was not legally adopted.

The Colorado Supreme Court ruled that the land use regulatory sections of the State conservation district law were an unconstitutional delegation of legislative authority when considered together with the provision making violation of district regulations a misdemeanor, because "the general assembly cannot delegate to any other person or body authority to declare what acts shall constitute a crime."*

As a result of the Olinger case the Colorado soil conservation district law was changed in 1961 in two respects:[209]

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* The Olinger case was one of those "hard cases" that, we are told, "make bad law." The Colorado Supreme Court noted that even if the State assembly itself had enacted a regulation amounting to a prohibition of any cultivation of appellant's land, it would be subject to constitutional challenge (presumably on the ground that it constituted a "taking", or a violation of substantive due process, or of equal protection of the law).

Furthermore, the Colorado statute did not follow the Standard Act provisions giving the supervisors discretion not to adopt an ordinance even if the ordinance received a favorable referendum. The court indicated it was scandalized that an ordinance backed by criminal sanctions had been passed by a referendum in which only 63 out of more than 300 eligible landowners participated. Forty-six of the 63 had voted by proxy.

(1) Henceforth, the violator of a district ordinance was not guilty of a misdemeanor. Instead, the enforcement section of the statute provided that violators may be enjoined (in a civil action brought by the supervisors) "from failing or refusing to do that which may be required or from doing that which is prohibited." Violation of injunctions entered by the court would be deemed contempt of court.

(2) A provision was added that district land use ordinances should be construed prima facie to be "reasonably required for the protection of public peace, health, safety, or welfare," although this construction would be open to contest on a case-by-case basis.

Although the constitutionality of district ordinances under the Colorado conservation district act has not been ruled on since the 1961 amendments, there is good reason to believe that such ordinances (assuming that they did not have other constitutional defects) could now survive the challenge of unconstitutional delegation of power.*[210] The provision that violation of an ordinance is grounds for a civil action for injunction is redundant. The Colorado statute (like the Standard Act and all of the State acts that include land use regulatory powers, except Nebraska) has always also authorized the supervisors to apply for a court order to compel the landowner to perform the work or avoidances needed to bring the land into compliance with the ordinance.*[211] This authority is essentially the same as standing to seek an injunction.

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* In the 1967 case of Asphalt Paving Co. v. Board of County Commissioners, plaintiff appealed denial of a declaratory judgment that the Board's authority to prohibit truck traffic in a residential neighborhood under the Colorado commercial traffic law was unconstitutional. The Colorado Supreme Court ruled that statutes granting local authorities "police powers" to make reasonable local regulations "for the protection of public morals, health, safety or welfare" were not unconstitutional delegations of legislative authority.

Although the Court did not overrule Olinger, it also decided that, since the statute made violation of local regulations a misdemeanor, the rule of the local authority did not "define a crime or make a law" but merely "determines the state of facts upon which the statute shall operate."

Lewis and Clark District Ordinance (Montana). Recently, EPA and some States have become interested in using conservation district regulatory powers as a means of implementing NPS pollution control plans. Consequently, in 1975, EPA made a grant to several agencies of the State of Montana to obtain information needed to build a successful program of sediment and related NPS pollution control. The principal State agencies responsible for this project are the Department of Natural Resources (which includes the Division of Conservation Districts) and the Department of Health and

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* Indeed, the Colorado Statute goes further than the Standard Act in providing that the district supervisors can enter the land, perform the work or avoidances, and recover their costs and expenses, with or without a court order. If they prefer to procede without court order, all that is required is notice by registered mail to the owner, agent or occupant.

A principal advantage of petitioning to the court to compel performance by the violator is that the court can elect not to order the supervisors to perform the work, if the violator is recalcitrant, but to enforce its order by contempt process.

Environmental Sciences. An important part of this study has been a pilot project conducted by the Lewis and Clark County Conservation District, under the direction of the Division of Conservation Districts, to develop a locally administered sediment control program based on BMPs that could be adapted to other areas with similar problems. As part of this project an effort was to be made to institute land use regulations under the Montana Conservation Districts Law (originally passed in 1939) to test their capability for enforcing locally developed BMPs.[212]

As a result, Lewis and Clark County Conservation District enacted an ordinance which became effective on August 1, 1977.[213] The ordinance requires that agricultural, forestry, and "construction/subdivision" activities conform to best management practices (previously adopted by the supervisors and incorporated into the ordinance by reference) where needed to prevent "accelerated erosion and sediment damage."*[214]

Land occupiers conducting agricultural activities are deemed in compliance with the ordinance if their land is managed according to a district approved conservation plan. But they need not have such a plan if their land management practices meet or exceed the BMPs adopted by the supervisors or if their practices are not, in fact, producing erosion problems.[215]

Timber harvesting activities are also deemed in compliance if in accord with a district conservation plan. If not, they require notice to the supervisors who may assist on a special "erosion and sediment control plan" that conforms to district BMPs.[216] Construction/subdivision activities, apart from minor exceptions, always require prior district approval of an erosion and sediment control plan.[217]

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* Accelerated erosion is defined to mean erosion that is more rapid than normal as a result of human activities.

Enforcement begins with a complaint (which may be filed by other land occupiers, supervisors, or State or county water quality management officials) alleging that accelerated erosion or sediment damage has occurred or is occurring. The district then notifies the alleged violator and gives him the opportunity to be present when the investigation is conducted. (The investigation may include a cost-benefit analysis of private as opposed to public benefits of application of BMPs.)

If the investigation verifies that a violation has occurred, the supervisors will discuss alternative solutions with the land occupier, offer him technical assistance and information regarding financial assistance, and specify a time for voluntary compliance. If the land occupier disagrees with the supervisors decision, he may discuss it with them at their next monthly meeting. But if the supervisors do not reverse their decision at such meeting, they shall notify the land occupier of their final decision and the prescribed procedure to correct the violation. They shall also notify him that he has 20 days to initiate corrective measures.

If, at this point, the land occupier does not demonstrate intent to correct the violation, the supervisors may petition the district court to compel performance of compliance with the ordinance as provided by the State law.[218] (The Montana Conservation District Act follows the Standard Act in authorizing the supervisors to petition for both specific performance and backup authority to perform the work themselves and recover the costs and expenses.[219])

The Lewis and Clark District ordinance also provides for establishment of a board of adjustment, as provided by the Montana conservation district law. Any person against whom a complaint has been filed may, within 60 days, appeal to the board for a variance on the grounds of practical difficulties or unnecessary hardship. If the variance is granted, the supervisors in turn may appeal to the district court.[220]

In a separate section, the Lewis and Clark District ordinance also provides that the supervisors shall have power "to initiate a court order to cease and desist against any person disturbing the land which results in accelerated erosion and sediment damage."[221]On the first reading, this section appears to throw a wild card into the deck. If this remedy were applied to agricultural activities, it could be used to eliminate the emphasis on voluntary compliance and the delays involved in the complaint procedure, and remove access to the board of adjustment. However, the legislative history of the ordinance indicates that the cease and desist order provision was intended to be used to stop construction/subdivision activities that are not in accord with an approved erosion and sediment control plan.*[222] Although agricultural activities causing accelerated sediment damage are obviously land-disturbing activities by the "plain meaning" of the language, it is unlikely that the supervisors will attempt to use this section in dealing with them.

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* In an earlier version of this ordinance, land-disturbing activities were defined to mean construction/subdivision activities and the section discussing requirements for such activities was headed "Land-Disturbing Activities". This phraseology was eliminated from the definitions section and the construction/subdivision activities section of the ordinance, as passed. Failure to eliminate it from the cease and desist order section was probably inadvertant.

- In a very important section on financial assistance, the supervisors are authorized to assist the land occupier to apply BMPs by obtaining cost-share funds from Federal, State, public or private sources. If the supervisors decide that public cost-sharing should be made available for correction of a violation, they are authorized to permit the land occupier to delay corrective measures until cost share funds are made available. Lack of such funds may be considered a "practical difficulty" and may justify a variance from the time set by the supervisors.[223]

NACD's case study of the Lewis and Clark district program predicts that the district will be designated as a nonpoint source management agency under Section 208 and observes that a request will be made of the State legislature for a special appropriation to pay the operational cost of the program. The NACD case study anticipates that cost sharing for installation of many BMPs will be available under ASCS's Agricultural Conservation Program (at a 50 to 70 percent level) and perhaps also under a potential State program. The Montana Renewable Resource Act of 1975 provides for accumulation of severance taxes on coal in a fund to provide grants and low interest loans for conservation of renewable resources.[224] Other suggested sources of funds for installation of BMPs are low cost loans from the Farmers Home Administration and Small Business Administration.[225]

Wisconsin Model Ordinance. A somewhat different erosion and sediment control ordinance is now being proposed as a model ordinance for Wisconsin districts. The Wisconsin Soil and Water Conservation District Act differs from most other district enabling laws in establishing districts that are more like county agencies than independent special-purpose local governments.

In Wisconsin, the county boards themselves create districts that are geographically coextensive with counties, appoint some of the district supervisors, and must ratify any exercise of district land use regulatory powers.[226]

The Wisconsin statute authorizes district supervisors to formulate land use regulations for land outside incorporated cities and villages, which then require, for adoption, both a successful referendum and enactment as county ordinances by the county board.[227]

The Wisconsin district law authorizes the district supervisors to inspect the land for violation of ordinances, petition the court to compel performance, and perform the work themselves and recover the costs if the defendent does not obey the court order.[228] However, the district is not authorized to impose fines. Instead, the Wisconsin district law provides that the county ordinance shall prescribe county administrative procedures for enforcement of land use regulations, which may include fines. The county is also authorized to petition for injunctions to halt violations.[229]

In 1973, a model sediment control ordinance was developed for use by Wisconsin soil and water conservation districts.[230] In June 1977, the Vernon County Board of Supervisors adopted an ordinance for the town of Stering that was partly based on the model ordinance. Mary Garner, NACD water quality law consultant subsequently reported that similar ordinances were under consideration in other Wisconsin counties.[231]

The Wisconsin model ordinance seeks to regulate much the same categories of land uses as the Lewis and Clark ordinance but makes no reference to BMPS or other standards for such uses. Agricultural land uses are in compliance with the ordinance when the land occupier has a cooperative agreement with the district, setting forth a conservation plan that is being implemented and maintained. But the requirement that the plan be implemented is contingent on the availability of technical assistance from the district for both structural and nonstructural measures and cost sharing assistance for the installation of structural measures on private land.[232]

If agricultural land uses are not under a district conservation plan, they are not in compliance with the ordinance unless the land user has obtained a permit from the County Zoning Administrator. Such permit must be approved by the district as complying with SCS technical guides.[233] Since application for such a permit requires prior preparation of a complicated soil survey and topographic plan,[234] it is unlikely that any farmer will choose a permit rather than a cooperative agreement to accept an SCS prepared conservation plan.

Vernon County Ordinance (Wisconsin). The Vernon County ordinance for the Town of Stering differs from the Wisconsin model ordinance in eliminating need for a permit for both agriculture and construction activities. Construction activities require a special erosion control plan instead of a permit.[235] The ordinance also gives the administrative and enforcement functions that the model ordinance gives to the County Zoning Administrator to the district.[236]

The Vernon County ordinance offers farmers who feel no need to enter a cooperative agreement with the district a more usable alternative. Agricultural lands are deemed in compliance with the ordinance where they are in contour strips, being managed in a conservation system acceptable to the district or being managed to meet SCS technical guide standards.[237] (Lands of less than six percent slope or in parcels of less than 1 acre are not subject to the ordinance.[238])

There is still some advantage to the farmer in having a cooperative agreement with the district, however. Where lands are under district conservation plans, implementation of the plan is not required for compliance with the ordinance unless technical and cost-sharing assistance is available,[239] just as under the Wisconsin model ordinance.

The proposed Vernon County ordinance authorizes the district or its designated agent to enter and inspect for violations, and to notify the land user to stop or correct the violation on pain of legal prosecution. If the land user fails to comply, the district or its agent shall file a complaint with the county district attorney who shall expeditiously commence any legal proceedings necessary for enforcement.[240]

Complaince may be enforced by a suit for injunction, brought either by the County or one or more real estate owners in the area affected by the regulations, and/or prosecution for a criminal fine of not less than $10 or more than $200 for each day of refusal to comply.[241] In addition, the district itself may petition the court to compel performance and authorize the district to perform the work itself, if the land occupier fails to comply with the court order, as provided in the Wisconsin district enabling law.[242]

The Vernon County ordinance also provides a larger role for the board of adjustment than provided by the Wisconsin district law and the Standard Act. The board of adjustment is authorized not only to hear and decide appeals for variance from the terms of the ordinances on the grounds of unnecessary hardships, but to hear and decide appeals from district error in the exercise of its administrative and regulatory powers under either this ordinance or the Wisconsin district law.[243]

Statewide Laws with Agricultural NPS Control Provisions

Beginning in the mid-1950's, some general-purpose local governments in rapidly urbanizing areas participated in conservation district-sponsored floodwater retention projects (under Public Law 566) to control the increased runoff from newly paved surfaces. The purpose of the projects was flood control, but the increased runoff was causing combined sewer overflow and destablilization of streambanks with resulting water pollution and sediment damage to adjoining lands.

In the process, some of the same local governments became concerned about the water pollution and damage to wildlife, recreation areas, and public water supplies caused by sedimentation from the land clearing and grading activities of suburban builders. In the late 1960's, having learned that the conservation districts (and the SCS technicians assigned to them) were experts in sediment control, a number of these local governments adopted ordinances requiring district approval of sediment control plans before issuance of builders' permits. (The Maryland and Virginia suburbs of Washington, D.C. in the muddy Potomac Basin were pioneers in this effort).[244]

In 1970, Maryland passed the first statewide sediment control law.[245] It exempted agricultural activities but conditioned the granting of grading and building permits to developers on approval by the soil conservation district of a sediment control plan. Since that time a model State erosion and sediment control statute drafted by representatives of NACD, EPA, USDA and State governments has been approved by the Council of State Governments and recommended to State legislatures.[246] Eleven additional States* and the Virgin Islands enacted some type of statewide sediment control law during the 1970's.[247] In addition, Montana enacted a streambed protection law, which provides that conservation districts must approve all "projects"** physically affecting natural streams and the lands immediately adjacent to them.[248] Also in this period the Pennsylvania Environmental Quality Board adopted rules and regulations for sediment control under its existing Clean Streams Law,[249] which provided for abatement of water pollution from nonpoint as well as point sources (under rules and regulations issued by the Board).

Most of the new Statewide sediment control programs are either amendments to the State conservation districts enabling law or are included in the same title of the State code, as the next chapter. But even in those cases where the State sediment control programs have been placed in some other category,* they make use of conservation districts in their implementation.

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* Georgia, Hawaii, Illinois, Iowa, Michigan, New Jersey, New York, North Carolina, Ohio, South Carolina, South Dakota.

** Montana Department of Natural Resources and Conservation rules list nonagricultural types of developments in streams and on banks that must be considered projects. In addition, the rules state that districts may elect to consider as projects farming operations, such as (1) brush removal, by mechanical means, spraying or otherwise, and (2) grazing and tree cutting on erosive sites. See note 248.

Four States (Georgia, Maryland, North Carolina, and South Carolina) exempt agricultural activities.[250] Virginia and Michigan exempt tilling, planting, and harvesting of agricultural crops but make some provisions for controlling sedimentation from other agricultural activities.**[251] The other eight states and the model state sediment control act all make some kind of provision for controlling agricultural sedimentation.

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* The Montana Natural Streambed and Land Preservation Act is in the Fish and Game title of the State Code. The Pennsylvania Act is in the Health and Safety title. The Maryland Statewide Sediment Control Act is in the Water Resources title. The North Carolina Sedimentation Pollution Control Act is in Pollution Control and the Environment. The South Carolina County Sediment Control Programs Act is in the same title as the South Carolina conservation districts law, Environmental Protection and Conservation, but the former is chapter 12 and the latter is chapter 9. The Virgin Islands Environment Shore Erosion and Sediment Control Law is in Conservation, whereas the soil conservation district law is in Agriculture.

**The Virginia law specifically requires that grading, excavating and filling on agricultural lands be subject to the same requirement of compliance with district programs or county ordinances applicable to construction-related, land-disturbing activities. The Michigan act provides that farmers may enter into agreements with soil conservation districts to carry out "earth change" activities (other than those specifically exempted) under State rules. On formal agreement with the district, such activities are exempted from requirements for site plans, land use plans or permits under the act but will become subject to the act's enforcement provisions after January 1, 1979.

Iowa

The first of the Statewide sediment control statutes to regulate agriculture was the 1971 Iowa statute[252] that amended the Iowa soil conservation districts law to require that all conservation districts set and implement soil loss limits[253] and also created (in an adjoining chapter of the code) six new conservancy districts responsible for building and operating "internal improvements" that were to be protected from siltation.[254] The Iowa law set up an agricultural sediment control program that differs significantly from the programs included in other sediment control laws discussed in this article. (Many subsequently passed laws were more or less based on the Council of State Government's Model Act). However Iowa is the only state that has an agricultural sediment control program in operation long enough to provide experience.

The Iowa law made it the duty of owners of real property in the State to establish and maintain erosion control practices or, in the case of agricultural land, soil and water conservation practices required by the regulations of the commissioners of the respective soil conservation districts.[255] Soil erosion resulting in sediment damage to the property of others is made a nuisance which may be the subject of an action to abate by injunction by the damaged property owner, the conservancy district whose internal improvements are silted up, or the soil conservation district within which the erosion is occurring. However, it is an adequate defense that an agricultural defendant was conforming to soil and water conservation practices approved by the conservation district or had submitted an application for public cost-sharing funds for the purpose of doing so.[256]

The Iowa law directs the conservation districts (with the approval of and within time limits set by administrative order of the State Soil Conservation Committee) to adopt reasonable regulations to establish and implement soil loss limits.* The district commissioner may:

(1) Classify land in the district on the basis of topography, soil characteristics, current use, and other factors affecting soil erosion.

(2) Establish different soil loss limits for different classes of land, subject to approval by the State Conservation Committee. (It is the stated intent of the statute that no agricultural land be assigned a soil loss limit that cannot be reasonably attained with reasonable soil conservation practices.)

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* "Soil loss limit" is defined to mean the maximum amount of soil loss due to erosion that the district commissioners determine is acceptable to meet the statute's erosion control and water quality goals. It is expressed in terms of tons per acre per year. See note 258.

(3) Require the owners of agricultural land to employ soil and water conservation practices.[257,258*]

However, the commissioners may not specify that particular practices must be used, so long as the owners voluntarily comply with the soil loss limits applicable to their land. In no case may the commissioners require that the owner or operator of agricultural land refrain from fall plowing of land on which he intends to raise a crop during the next succeeding growing season.[259]

Regulations proposed to be adopted by conservation district commissioners must be approved by the State Soil Conservation Committee (which may amend the regulations) and must also be the subject of a public hearing, at which any landowners and occupiers who would be affected by such regulations may testify.[260]

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* The statute specifies that the soil and water conservation practices that commissioners may designate as acceptable to protect soil loss limits are of two kinds:

a. "Permanent soil and water conservation practices" means planting of perennial grasses, legumes, shrubs, or trees, establishment of grassed waterways, and construction of terraces, or other permanent soil and water practices approved by the State Soil Conservation Committee.

b. "Temporary soil and water conservation practices" means planting of annual or biennial crops, use of strip-cropping, contour planting, minimum or mulch tillage, and any other cultural practices approved by the State Soil Conservation Committee. See note 258.

The Iowa law provides that the commissioners of any soil conservation district must inspect any land in the district upon the receipt of a written and signed complaint, from an owner or occupant of land damaged by sediment, that soil erosion in excess of the limits established by the district's regulations is occurring. If the commissioners find that excessive soil erosion is occurring on the land inspected, they are required to issue an administrative order to the landowner(s) and occupier(s) and deliver it to each of these persons by personal service or restricted certified mail. The administrative order must state as nearly as possible the extent to which soil erosion exceeds the district's soil loss regulations. In the case of farm land, the administrative order shall require that work needed to establish or maintain the necessary soil and water conservation practices be begun at a time not more than 6 months after service of notice of the order and completed at a time not more than 1 year after such service.[261]

However, before legal action can be taken against the owner or occupant of agricultural land, it must be determined that cost sharing assistance is available (and has been specifically approved for such land). Such cost sharing assistance must cover at least 75 percent of the cost of installing any permanent soil and water conservation practices or an amount specified by the State Soil Conservation Committee for temporary practices. Evidence that the owner or occupant has made application for cost sharing funds, from a source having authority to pay a portion of the cost, is considered the commencement of work required by the administrative order.

Once the district is informed that the owner or occupant's application for cost sharing has been approved, the district issues and provides notice of a supplemental administrative order. The supplemental administrative order advises the owner and occupant that they must now begin the necessary work on a date not more than 6 months after approval of the application for cost sharing and complete it at a time not more than 1 year thereafter.[262]

If the work is not initiated or completed as required, or the landowner or occupant advises the district that he does not intend to do the work, the district must petition the district court for a court order to require immediate compliance with the district's administrative order.[263] The burden of proof is then on the district to show that soil erosion is in fact occurring in excess of the applicable soil limits and that the defendent has not established or maintained soil and water conservation practices in compliance with the district's regulations.[264,265] The court may issue an order that modifies the district's administrative order. But if the defendant fails to carry out the court order he is deemed in contempt of court and may be punished accordingly.[266] (Iowa law provides that a district court may imprison a person whose contempt consists of refusal to perform an act he is able to perform until he agrees to perform it. The district court may also punish contempt of court by a fine of up to $500 or imprisonment up to 6 months or both. 267)

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* The district may enter and inspect defendants land on 10 days notice by restricted certified mail. See note 265.

After the passage of the sediment control law, Iowa became the first State to appropriate funds for cost sharing conservation practices. The appropriations statutes specify that appropriated funds only be used to cost share permanent practices. They provide that only 5 percent of appropriated funds may be used to provide 75 percent funding to abate nuisances under the sediment control law. Another 5 percent of the total funding is earmarked for voluntary installation of permanent practices in watersheds above a number of State-owned lakes that have been identified by the Iowa Conservation Commission (the State fish and game agency) as suffering from serious sediment damage.*[268]

The remaining 90 percent of appropriated cost share funds is to be used to provide 50 percent funding for voluntary installation of permanent soil erosion and sediment control practices throughout the State, with priority given to owner-operated and family-operated farms.

This money has been allocated among the districts by the State Soil Conservation Committee, largely on the basis of priorities identified in the Iowa Conservation Needs Inventory.[269]

The Iowa General Assembly appropriated $12 million annually for cost-sharing conservation practices in fiscal years 1973, 1974 and 1975.

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* William Griener, Director of the Iowa Soil Conservation Committee until the end of 1977, reports that it has been difficult to induce enough cooperation to spend the earmarked 5 percent in these "critical" watersheds because cost-sharing is limited to 50 percent. It is likely that more cooperation will be forthcoming if Culver amendments funds can be used to provide a larger public cost share. See note 270.

It appropriated $2.5 million for 1976, $4 million for fiscal 1977, and $4.3 million for fiscal 1978.[270]

In 1975, the Iowa Conservation Commission (the State fish and game agency) filed 116 complaints, mostly against farmers, on the basis of sediment damage contributing to silting up and eutrophication of State-owned lakes created by water impoundments.[271] Theoretically the State has sufficient ownership rights in at least some natural lakes and streams to file complaints concerning sediment damage to them under the Iowa sediment control law.*[272] In fact, it has not attempted to do so.

The 1975 complaints were dismissed as defective because they were filed against every landowner in the watershed above the eutrophying lakes without reference to whether individual landowners were or were not complying with district-prescribed soil conservation practices and without identifying the particular lands that were exceeding soil loss limits.[273]

More recently the Iowa Conservation Commission has filed four or five valid complaints. However Griener believes it will cost about $100,000 on one farm alone to meet soil loss limits and that (unless funds appropriated to USDA under the Culver Amendment can be obligated to pay all or part of the 75 percent public cost share for abatement of individual nuisances) most of this must come from State funds.[274]

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* Iowa law is that the beds of navigable and meandered lakes and streams belong to the State. (The riparian owner takes only to the highwater mark.) In addition, although there has been no case in point, Iowa courts (like courts in other riparian rights State) have said that the State holds a trust interest in all navigable and meandered waters for the public, to protect its rights to navigation, recreation, and fish and wildlife.

Although the Federal agricultural conservation program also provides cost sharing for many permanent sediment control practices, Iowa has never attempted to use ACP funds to pay any part of the required 75 percent public cost share. This is because disbursement of ACP funds is decided on by county ASC committees on the basis of their own county programs which typically have a variety of objectives, whereas the Iowa sediment control law requires that 75 percent cost sharing funds be definitely obligated and made available to carry out every district administrative order requiring installation of permanent practices. However, since ACP funds are frequently available for many of the same kinds of permanent practices that are eligible for 50 percent State cost sharing as voluntary soil erosion control practices, the volunteer farmer may apply for Federal or State cost sharing at his own option.

Since there is no dollar limit on State funds similar to the $2,500 per farm limit for ACP funds, farmers sometimes apply to both the county ASC committee and the district, for the purpose of obtaining 50 percent funding up to the $3,500 limit from the ACP and 50 percent funding of the rest of the project from the State. But it is against current Iowa executive branch and General Assembly policy to award State cost share funds for the purpose of increasing the total public cost share for voluntary installation of practices over 50 percent.[275]

The Model Act

Following analysis of the Iowa statute, it seems appropriate to examine the Council of State Governments' 1973 Model State Act for Soil Erosion and Sediment Control for two reasons. One is that most of the sediment control laws amending State conservation district laws, passed since the Iowa statute, appear to based, at least partly, on the Model Act.* The other reason is that NACD has recently published and circulated a set of "alternative provisions" to the Model Act,[276] in part for the purpose of making the Model Act into a more adequate legal basis for an agricultural NPS regulatory program satisfactory to EPA.[277] The alternative provisions have not been incorporated into any State laws as of this writing.

The Model Act (followed by most of the State sediment control laws based on it) requires the State Soil and Water Conservation Commission to prepare a State program to control soil erosion and sediment damage from "land-disturbing" activities, including guidelines for development of regulatory programs by the districts.

Land-disturbing activities are defined to mean any land change which may result in movement of sediment into waters or onto land, including tilling, clearing, grading, excavating, transporting, and filling of land (other than Federal land) except for minor activities such as home gardens, landscaping, repair and maintenance.[278]

The Model Act gives the State Commission responsibility for developing a comprehensive sediment control program, in cooperation with the State water quality agency, other appropriate State and Federal agencies and an advisory board representing housing, financing, industry, agriculture, recreation, and local government agencies.[279]

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* This category includes the New Jersey and Virginia statutes which resemble the regulatory scheme set forth in the Model Act for nonagricultural land-disturbing activities, but exempt major agricultural activities.

As a part of this program, the Commission is required to adopt guidelines for carrying out the program by a date specified in the individual State law. The Commission is required to conduct public hearings after giving due notice (as defined in the State conservation district law) before adopting or revising the guidelines. The Model Act states that the guidelines must:

> (1) Be based upon relevant physical and developmental information concerning the watersheds and drainage basins of the State, including, but not limited to, data relating to land use, soils, hydrology, geology, size of land area being disturbed, proximate water bodies and their characteristics, transportation, and public facilities and services;
>
> (2) Include such survey of lands and waters as may be deemed appropriate by the Commission or required by any applicable law to identify areas, including multijurisdictional and watershed areas, with critical erosion and sediment problems; and
>
> (3) Contain conservation standards for various types of soils and land uses, which standards shall include criteria, techniques, and methods for the control of erosion and sediment resulting from land-disturbing activities.[280]

Every district in the State is required to develop and adopt its own sediment control program, consistent with the State program and guidelines, within a time period after adoption of the State guidelines to be specified in the individual State law. The district is to be assisted in developing its program by an advisory committee (representing the same interests represented on the State advisory board) and is entitled to assistance from the State Commission, on request.

Upon adoption of its program, the district is required to submit the program to the Commission for review and approval. If the district fails to submit the program within the statutory time period, the Commission is required (after appropriate hearings or consultations with local interests) to develop and adopt an appropriate program (by implication including standards) to be carried out by the district.[281]* In this respect the Model Act appears stronger than the Iowa law, which does not provide that the Iowa Soil Conservation Committee may draw up a district program if the district commissioners fail to do so.

After the program has been approved by the Commission, the district is given a time period (to be set by the State statute) in which to adopt conservation standards for various soil types and land uses.** These standards are required to include "criteria, guidelines, techniques, and methods for control of erosion and sediment resulting from land-disturbing activities." Before adopting any conservation standards or changes in existing standards, the district is required to give "due notice" and conduct a public hearing on the proposed standards or changes. Although the Model Act requires district standards to be consistent with State guidelines concerning conservation standards, the Act makes no provision for Commission review and approval of district standards.* Both program and standards must be made available for public inspection at the principal office of the district.[282]

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* Section 4 of the Model Act also provides that in areas where there is no conservation district (almost certainly nonagricultural areas), the Commission must designate a general-purpose local government to develop, adopt and implement a local sediment control program.

** The "program," which must first be approved by the State Commission, is understood to include goals, organization, time frame, manpower and other administrative details. The "standards" mean technical performance standards and may include, among other things, soil loss limits and BMP. See note 273.

The Model Act provides different mechanisms for controlling prohibited land-disturbing activities" of different classes of land users. Owners, occupiers, or operators of private agricultural and forest land who have district-approved farm or ranch conservation plans for normal agricultural and forestry activities and are maintaining such plans, or whose normal agricultural and forestry activities comply with district conservation standards, are entitled to cost sharing and technical assistance to help avoid violating the act. Such persons are not deemed to be engaged in prohibited land-disturbing activities unless at least 50 percent cost sharing assistance or adequate technical assistance is made available for installation of the erosion and sediment control measures required for compliance with their approved farm or ranch conservation plans or district conservation standards.[283]

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* The Model Act's failure to require that district standards be approved by the State Commission appears to give the Commission less control over the stringency of such standards than the Iowa sediment control law, which requires State agency approval of all district regulations and even permits the State agency to amend such regulations. See note 257. It does not necessarily follow that districts will be able to "get away with" less stringent standards in States that follow the Model Act, however, because the Commission or other State or Federal agency responsible for disbursing cost sharing funds may refuse to allot any to districts whose standards are inconsistent with State guidelines.

The Model Act authorizes the district on its own initiative to make on-site inspections to determine whether the resident owner, operator or occupier is complying with his approved farm conservation plan or conforming with district conservation standards.* The district is required to give the resident owner, operator, or occupier notice that the inspection will be made and an opportunity to accompany the inspector. If the inspection reveals that the land occupier is not complying with the approved farm plan or the districts standards, he must be notified by registered mail of the measures needed for compliance. The notice shall require commencement of such measures within 6 months from the date of the notice. If the land occupier fails to comply with the notice he will be deemed in violation of the act and subject to its penalties.[284]

But the decision of the district that a violation exists is subject to judicial review, provided an appeal is filed within 30 days. (Judicial review is available on the same terms from all other decisions of the district and the Commission.[285])

Assuming no appeal is taken, violators of the act may be prosecuted for a misdemeanor and subject to a fine of up to $500 or up to 1 year imprisonment for each violation. Every day the violation continues shall constitute a separate offence.[286]

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* The Model Act appears to give the districts more control over enforcing the use of agricultural BMPs than the Iowa law, which does not permit districts to inspect until a written complaint is filed by the owner or occupier of lands damaged by excessive sediment.

In addition, the district, the Commission, or "any aggrieved person who suffers damage or is likely to suffer damage because of a violation"* may apply to the court for injunctive relief. The county attorney shall take whatever legal action is needed to enforce the act, on request of the district, and the State Attorney General, on request of the Commission.[287]

In early 1978, NACD published a set of alternative provisions for use with the Model Act, by States considering the adoption of sediment control laws or amendment of existing sediment control laws to meet the needs of the section 208 planning effort. These alternative provisions were developed in response to suggestions made at State seminars on the Model Act, conducted by NACD in over 40 States.[288]

The main thrust of the alternative provisions is to put more emphasis on the pollution control aspects of erosion and sediment control and to extend the coverage of State and district programs under the Model Act to pollutants other than sediment.

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* The damage that an "aggrieved person" may seek to enjoin is not limited to property damage resulting from siltation (as in the Iowa law). Since section 2 of the Model Act defines "persons" to include individuals, business firms, utilities, State and local government bodies and agencies, public and private institutions and associations of all sorts, the Model Act unquestionably confers standing to sue for injunction on government agencies with environmental responsibilities, local citizens associations and public interest groups.

NACD alternative provisions embodying this main thrust include the following amendments to the Model Act.

(1) Addition of the phrases "to reduce damage from stormwater runoff" and "to retard nonpoint pollution from sediment and related pollutants" to section 1, the act's declaration of policy.[289]

(2) Redefinition of "land-disturbing activities" to include those resulting in movement into waters and lands of "sediment related pollutants."[290]

(3) Redefinition of "erosion and sediment control plan" to include a plan for control of sediment related pollutants, stormwater runoff, or accelerated erosion not related to a new land-disturbing activity.[291]

(4) Addition of the following definition to section 2.

> "Sediment related pollutants" means substances such as nutrients pesticides, pathogens, and organic materials which are transmitted with or in association with sediment. It also means salts in irrigation return flows and animal wastes.[292]

(5) Addition of the requirement that the State Commission's guidelines include standards for sediment related pollutants.[293]

(6) Addition of the requirement that district standards (which are the equivalent of enforceable BMPs) include criteria, guidelines, techniques, and methods for control of sediment related pollutants.[294]

By adding reduction of damage from stormwater runoff and regulation of sediment related pollutants (defined to mean any kind of agricultural NPS pollutants whether carried by sediment or not), the Model Act appears able to cope with any agricultural NPS pollution problem in any section of the country. Indeed, with these additions, plus an amendment including control of irrigation return flows, the Model Act can serve as a fully acceptable basis for a Statewide section 208(b)(4) regulatory program for agricultural NPS pollution in any section of the country. The districts and State Commission (given adequate funding) can be approved as designated management agencies.

Another of the NACD alternative provisions clears up the Model Act's perceived ambiguity concerning conservation measures that cannot be compelled without 50 percent cost sharing assistance. Section 5(c) of the Model Act states that land operators are not to be deemed engaged in prohibited acts unless "50 percent cost sharing assistance or adequate technical assistance for the installation of erosion and sediment control measures", required by their farm conservation plans or the district standards, are made available to them. This could conceivably be interpreted to mean that land operators cannot be required to install practices that require little or no extra expenditures, such as conservation tillage, unless such operations are given 50 percent public cost-sharing.

Consequently, the NACD alternative provisions delete section 5(c) and insert new language into alternative section 6(a) which removes the possibility of this interpretation. This states that the assistance which must be made available to land operators before they are deemed in violation of the act is "50 percent cost sharing assistance or technical assistance for the installation of enduring measures." (Enduring measures are defined in an alternative provision added to section 2 as "those conservation practices which have a useful life of at least ten years and which have substantial public benefits."[295])

Alternative section 6(a) also adds the provision that the Commission, in the case where the Commission develops a district sediment control program on failure of the district to submit one, has the same authority as the district to make on-site inspections. It adds the further provision that the district and, in the appropriate case, the Commission may make on-site inspections in response to a filed complaint.

A related provision, alternative section 10, authorizes "any person claiming damage" to file a written complaint with the district or, in an appropriate case, the Commission without prejudice to the right of such a person to apply for a court injunction under revised section 12, the alternative penalties section, or to make use of any other legal remedy. Since alternative section 6(a) does not require the district to respond to a field complaint with an on-site inspection but merely authorizes it to do so,* this provision does not appear to confer a new right on the damaged person, who was always entitled to complain to the district in any event. But it does perhaps have the effect of encouraging districts to take the point of view of local citizens associations and environmentalists more seriously and of encouraging the latter to work cooperatively with the districts.

Still another alternative provision, section 9(b), specifically authorizes the Commission to make grants of funds to districts to carry out the purposes of this Act.

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* The Iowa law does require the district to so respond. But in Iowa, only a person who alleges that his land has been damaged by the violation may file a complaint.

Pennsylvania

Pennsylvania is now setting up another type of agricultural NPS control program that can probably meet EPA's SAM-31 requirements as well as the Model Act. The Pennsylvania sediment control program is under the State's Clean Stream Law[296] rather than the State's soil conservation districts law. However, the State is making use of the services of the conservation districts to administer this program. This process is facilitated by the transfer (in 1971) of the State Conservation Commission and the conservation districts from the State Department of Agriculture to the Department of Environmental Resources (DER) which is responsible for all aspects of resource conservation and pollution control.[297] Whereas the State Conservation Commission continues to set policy for the State role in conservation district affairs and approves and coordinates district programs, DER's Bureau of Soil and Water Conservation provides assistance to districts and administers the funding they receive from the States.[298] Three DER bureaus (Water Quality Management, Soil and Water Conservation, and Litigation and Enforcement) have jointly developed an operating procedure by which the sediment control portion of the Clean Stream Law shall be administered by the Bureau of Soil and Water Conservation and the 66 conservation districts. Inspection and enforcement activities are handled by the Bureau of Litigation and Enforcement, but the operating procedure provides that DER may delegate inspection responsibilities to the districts, at their request.[299]

The sediment control program is governed by erosion control regulations developed by DER's Environmental Quality Board (EQB) (under sections 5 [300] and 402[301] of the Clean Streams Law) and the provisions of section 316 [302] of the Clean Streams Law. Section 316 was intended and has mainly been used to control pollution from mining but is clearly applicable to and will be used to control agricultural NPS pollution.[303] The terms of these sections of the statute grant authority to the Sanitary Water Board of the Department of Health, which has been abolished. Authority to make regulations have now been delegated to EQB,*[304] and authorities (of both the Sanitary Water Board and the Department of Health) to administer and enforce the Clean Streams Law have been delegated to DER.[305]

Section 5 states that EQB has the power and duty to promulgate rules, regulations and orders necessary to implement the provisions of the act, to establish policies for effective water quality control and management, and to be responsible for development and implementation of waste management and other water quality plans.[306]

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* EQB is DER's top level policy-making body. Its membership includes the Secretary of Environmental Resources (the chairman) and the Secretaries of Transportation, Health, Commerce, Agriculture, Labor and Industry, and Community Affairs and the heads of the State Fish and Game Commission, the State Planning Board, the Public Utility Commission and the Historical and Museum Commission. It also includes four members of the General Assembly and five members of a Citizens' Advisory Board.

Section 5 gives DER the power and duty to administer all permit systems established under the law, issue orders needed to implement the provisions of the law or the rules and regulations of the EQB, and receive and act on complaints. DER is further authorized to inspect public or private property for compliance with provisions of the law and rules, regulations, orders, or permits issued pursuant to the law, and to perform other duties at the direction of EQB.[307]

Section 402, entitled "Potential Pollution", provides that EQB may issue a regulatory order whenever it finds that "any activity, not otherwise requiring a permit under this act" creates a danger of water pollution or requires regulation to avoid water pollution.[308] Section 402 provides that the regulations may require that such activity be required to conform with permit conditions.[309]

Section 316 is entitled "Responsibilities of landowners and occupiers."[310] It states that whenever DER finds that pollution or a danger of pollution is resulting from a "condition which exists on land", the DER may order*[311] the landowner or occupier to correct the condition or to allow an agency of the State access to the land to take such action. In the latter case, DER may assess the cost of correcting such conditions on land against the violator in the same manner as a civil penalty under Section 605 of the act.

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* All orders of DER may be appealed to an Environmental Hearing Board, composed of three lawyers appointed by the Governor, whose decision in turn is subject to judicial review on the same basis as other administrative agency decisions. See note 311.

Section 316 states that if the pollution or danger of pollution results from sediment from land for which a complete conservation plan has been developed by the local conservation district and SCS, and the plan has been fully implemented and maintained, the landowner is excluded from the penalties.

It may turn out to be of some significance that Section 316 unquestionably gives DER authority to order abatement of agricultural NPS conditions (such as winter spreading of manure) that result in pollution caused by runoff rather than sedimentation. However, DER officials do not consider that such problems occur as frequently in Pennsylvania as in other States.[312]

Neither section 402 nor section 316 provide that any violation is exempt from the penalties in the act if public cost-sharing is not available for needed correction measures. Afton Schadel of the Pennsylvania Soil Conservation Commission expects that Culver Amendment cost-sharing funds will be allotted to the installation of structural practices recommended in 208 plans for the critical areas which have the most severe sedimentation problems and require the most expensive remedial work. He also hopes that the Culver Amendment can be interpreted to provide for sharing the cost of retiring from production marginally productive but highly erosive lands in such critical areas.[313]

Elsewhere in the State no public cost-sharing funds are expected to be available for installation of conservation practices except for those funds county ASC committees may make available under the ACP. Schadel believes Pennsylvania agriculture will be able to conform with the requirements of the Clean Streams Law without a Statewide cost-sharing program. When asked to explain why Pennsylvania can clean up agricultural pollution without

Statewide cost sharing whereas Iowa cannot, Schadel points out, not only that Iowa soils are more erosive, but that the Clean Streams Law does not require the districts to set soil loss limits applicable to every field in the district as the Iowa law does. Instead DER is aiming for farm conservation plans that set soil loss limits for every farm operation as a whole.[314]

Section 602 is the criminal penalties provision of the Pennsylvania Clean Streams Law. It provides criminal penalties for violations of the rules, regulations and orders of DER and of any condition of any permit under the act and is equally applicable to public or private point source or nonpoint source violators.

Section 602 provides that any such violation is a summary offense and, on conviction, the violator is subject to a fine of from $100 to $1000 for each separate offense or, if he refuses to pay, 60 days imprisonment.[315] Each day of continued violation constitutes a separate offense.[316]

Section 602 further provides that if the violation is either wilful or negligent, the violator is guilty of a misdemeanor of the third degree and is subject to a fine of from $2,500 to $25,000 for each separate offense, or imprisonment for 1 year or both.[317] If within 2 years of conviction for such misdemeanor the polluter commits another violation he is guilty of a second degree misdemeanor. In such case he is subject, on conviction, to a fine of from $2,500 to $50,000 for each separate offense, or to imprisonment for up to 2 years or both.[318]

The criminal penalties provision of the Clean Streams Law was made a good deal more severe by October 1976 amendments intended to bring its maximum penalties into line with Pub. L. 92-500, so that Pennsylvania could satisfy EPA's requirements for administration of the point source NPDES within its borders.[319] Before the 1976 amendment, section 602 provided that a first violation of the Clean Streams Law was always a summary offense and that a violation was a misdemeanor only if it occurred within 2 years of a conviction for a summary offense. Furthermore, under the old section 602, the misdemeanor could only be penalized by a fine of from $100 to $2,500 for each separate offense, or up to 1 year in jail (on default of payment).[320]

The greatly increased criminal penalties make it extremely unlikely that DER will choose to use Section 602 against such comparatively minor polluters as individual farmers who violate EQB's erosion and sediment control regulations. But Pennsylvania officials believe that the fact that such farmers can be prosecuted under section 602 and fined $25,000 or considerably more* may make them more willing to spend the smaller sums needed to correct "a condition on land" under section 316.[321]

Section 605 of the Clean Streams Law provides civil penalties for violations of the act, DER regulations, orders and permit conditions. The civil penalties are declared to be in addition to any other remedy at law or equity. Section 605 provides that DER may, after hearing, assess a penalty on such a violator*[322] of up to to $10,000 per day for each violation. In determining the amount of such penalty, DER must consider the willfulness of the violation, the extent of damage to waters and uses of waters, the cost of restoration, and other relevant factors.[323]

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* A violation of the act or its regulations that is neither willful nor negligent is merely a summary offense, subject to penalty of as little as $100. But the terms of EQB's regulations and the actions DER and the districts have taken to implement them (both of which will be discussed) make it unlikely that farmer violators of the regulations can reasonably claim to be neither willful nor negligent.

In September 1972, DER's Environmental Quality Board promulgated regulations under sections 5 and 402,[324] whose stated purpose was to control "accelerated erosion"**[325]and resulting sedimentation for the purpose of preventing water pollution from sediment and fertilizers, pesticides and other polluting substances carried by sediment.[326]The 1972 erosion control regulations required all persons engaged in "earth moving activities" to adopt and maintain an effective erosion and sediment control plan. In addition they required permits for all earth moving activities on areas of 25 acres or larger "other than plowing and tilling for agricultural purposes." Erosion and sediment control plans are required for all earth moving activities, including agricultural activities. Such plans must be prepared by a person trained and experienced in erosion and sediment control***and must include the following:

(1) the topographic features of the project area;

(2) the types, depths, slope, and areal extent of the soils;

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* Other legislation has delegated this authority to the same independent Environmental Hearing Board that is authorized to hear appeals from DER decisions. See note 322.

** This is defined to mean soil erosion caused by human activities in excess of what would occur from natural processes alone. See note 325.

*** As will be explained, this requirement has been modified for low erosion risk agricultural operations.

(3) the proposed alteration to the area;

(4) the amount of runoff from the project area and the upstream watershed area;

(5) the staging of earthmoving activities;

(6) temporary control measures and facilities for use during earthmoving;

(7) permanent control measures and facilities for long term protection and;

(8) a maintenance program for the control facilities including disposal of materials removed from the control facilities or project area.[327]

Because construction for urban and industrial development was considered a greater and more immediate threat to Pennsylvania waters and because DER developed a construction permit approvals procedure that made priority use of conservation district resources in 1973-74,[328] the regulations provided that implementation of the provision requiring erosion and sedimentation control plans for agricultural activities be postponed until July 1, 1977.*[329]

However DER began to inform farmers soon after the act was passed that they too would need conservation plans. A widely circulated DER brochure entitled "Farmers and the Clean Stream Law" recommends that farmers become cooperators in their local conservation districts so that the districts can assign SCS technicians to investigate their erosion problems, propose alternative solutions and ideas to help implement them, and provide all technical assistance needed to prepare their plans (including aerial photographs and soil maps) without charge. The brochure also states that some conservation measures may be eligible for cost sharing from ASCS. DER also circulated four alternative agreements prepared by its agricultural advisory committee concerning division of responsibility for implementing plans between landowners and tenant farmers.[330]

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* This provision has been interpreted to mean that farmers are in violation unless they either have a plan or have requested planning assistance from their conservation district by that date. Preparation of plans under district auspices was not completed in the spring of 1978 when this was written.

In addition, DER published its Soil Erosion and Sedimentation Control Manual for Agriculture in August 1974. The January 1975 edition of this manual explains that DER will select priority areas on a Statewide basis for conservation areas, prime agricultural land, and critical areas and that county conservation districts will select priority areas within their boundaries for immediate planning attention and continued land use monitoring.[331] The manual explains what is required of farmers in terms of plan contents, implementation schedule, and vulnerability to plan review, revisions, and site inspections.[332]

The manual explains that a minimal conservation plan is sufficient for low erosion hazard sites. This may consist of a statement that erosion risks or extent of agricultural land disturbance is minimal or that existing conservation treatment is adequate. The farmer may request the conservation district to review his existing conservation treatment program and provide him with a letter indicating its approval.[333]

The manual explains that a conservation plan for a medium-to-high erosion hazard site must be prepared by a person trained and experienced in erosion control and must meet the standards for plan content set forth in the manual,[334] including soil data conservation plan map and narrative of applied or planned erosion control measures for each field or group of fields of the same land use.[335] A plan that meets such standards and shows measures to keep soil losses within acceptable limits and prevent off-site damages can be prepared by a landowner or consultant.[336] However, if the landowner becomes a district cooperator, the district will arrange for SCS to give him free technical assistance to prepare his plan. Conservation plans are presented for district cooperators in order of priorities set by the district. The landowner himself is responsible for their implementation.[337]

Ohio

The first State after Iowa to attempt to institute an agricultural as well as a construction related sediment control program was Ohio. The former Ohio law was enacted in two amendments to the State's conservation districts law in late 1971 and 1972.[338] It went farther than the Iowa law in encompassing agricultural pollutants other than sediment, but it had no enforcement provisions.

SB 305, the 1971 Ohio amendment, authorized the Division of Soil and Water Districts,* subject to approval of the Director of Natural Resources, to recommend methods and management practices to meet air and water quality standards relating to "agricultural pollutants and sediment pollutants resulting from residential, industrial and other urban developments."[339] SB 305 further directed the Division to name two advisory groups to make recommendations of methods and management practices for meeting such air and water quality standards, one for agricultural pollutants and the other for urban sediment pollutants. The agricultural advisory board was to include from 7 to 11 members representing agricultural agencies, industry, and organizations. At least two members were required to be conservation district supervisors.[340]

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* The Ohio Department of Natural Resources consists of ten divisions, of which one is the Division of Soil and Water Districts. Apart from its duties concerning NPS pollution abatement, the Division is responsible for providing leadership to the soil and water conservation districts in planning, budgeting, staffing and administering district programs; training district supervisors and personnel; and assisting the State watershed development and coordinating programs between districts and other agencies

SB 305 also required the Ohio Soil and Water Conservation Commission to recommend to the Director of Natural Resources a procedure for coordinating a program of agricultural pollution abatement, as well as a program of urban sediment pollution control.[341] Implementation of the agricultural program was to be based on air and water quality standards set by the two State agencies then responsible for air and water quality.[342] The Division of

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(footnote continued from p. 112)

of local, State and Federal Government. Ohio has a Soil and Water Conservation Commission, a seven member board that relies on the Division for staffing. Apart from its duties concerning NPS pollution abatement, the Commission performs much the same functions as the Standard Act's State Committee with respect to creating districts, regulating their elections, facilitating the exchange of information between districts, seeking Federal and State agency assistance for its programs and deciding on the distribution of State funds appropriated for district operations. In other matters involving assisting, coordinating and funding district programs the Commission functions as an advisory board to the Director of Natural Resource.

Soil and Water Districts was to coordinate the efforts of State and local government agencies to meet the State air and water quality standards relating to agricultural pollution.[343]

In addition, SB 305 authorized, but did not require, soil and water conservation districts "to enter into agreements or contracts with the Ohio Department of Natural Resources for the determination, implementation, inspection, and funding of agricultural pollution abatement and urban sediment pollution abatement measures whereby landowners, operators, [and several categories of urban users] may meet adopted State standards."[344] SB 305 also authorized districts to enter on lands in the district in the necessary discharge of their duties,[345] but it did not impose any duty on landowners and operators to install such pollution abatement measures, nor create any penalty for failure to do so.*

A few months later, in 1972, SB 397 added a few provisions to SB 305 for the purpose of making the new Ohio Environmental Protection Agency (OEPA) the agency responsible for setting air and water quality standards for agricultural pollutants and urban sediment pollutants and giving OEPA responsibility for implementation. It directed OEPA to use the Department of Natural Resources, the Division of Soil and Water Districts, and the local soil and water conservation districts "in encouraging abatement of agricultural pollution.[346] In addition, SB 397 added a provision intended to ensure that all areas of the State had agricultural pollution control programs. This provision was that failure of the district to make an agreement with the Department to determine, implement, inspect and fund agricultural pollution measures requires the Department to authorize the Division of Soil and Water Districts to implement the required program.[347]

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* Ohio is not a State in which conservation districts are authorized to enact land use ordinances that could impose such duties and create such penalties.

When SB 397 was enacted it appeared that Ohio law provided for statewide district-level agricultural NPS control programs that lacked enforcement provisions but could easily meet EPA requirements for "other than regulatory" programs, providing that State or Federal cost sharing would be made available for those management practices that would require such incentives. This did not turn out to be the case. The two advisory boards were appointed immediately and began work on development of "methods and management practices." However, there was no attempt to relate these practices to air and water quality standards which OEPA could enforce, because OEPA never developed any air or water quality standards for agricultural (or for that matter, urban sediment) pollutants. OEPA and the Department of Natural Resources were in agreement that receiving water quality standards for diffused land use activities, whose relative pollutant loads depended on weather events, made no sense.[348]

Consequently, no districts entered into agreements with the Department to set up agricultural pollution abatement programs. However the agricultural advisory board developed its methods and management practices in the form of "proposed pollution abatement standards and regulations" that would be applicable if district abatement programs were established. The Division of Soil and Water Districts sent the advisory standards to the districts for guidance.[349] The proposed standards were for sediment pollution and animal waste pollution.* The advisory board found that fertilizer pollution was not presently a serious problem in Ohio and that pesticide pollution was being adequately dealt with under Federal and State pesticide control law. It recommended that Ohio rely (for the time being) on sediment control to control pollution from the latter two sources.[350]

Recommended "minimum conservation standards" for sediment control were based on SCS-developed soil loss tolerance factors. The advisory committee recommended also that these factors be phased in over a 10-year period to alleviate economic hardship due to the need for different tillage equipement.[351] Recommended standards for animal waste control were based on elimination of discharges in excess of State Water Quality Standards by containment and land application.[352,353]**

The advisory board also recommended 75 percent cost sharing from combined Federal and State sources for installation of eligible practices when approved by the district. It recommended that the State pay whatever was needed to bring the total public cost share up to 75 percent, subject to a limit of $5,000 per person for animal waste containment and management facilities. However, the list of eligible practices was restricted to six sediment control practices and animal waste control practices dealing with existing pollution. New or expanding animal waste facilities were expected to prevent pollution, without financial assistance, through proper construction.[354]

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* Ohio is a state in which almost all animal waste problems are being treated as nonpoint problems since fewer than 10 of the State's feedlots are big enough to be included in the NPDES. See note 348.

** Shortly after this time a USDA-State multiagency committee developed and published the Ohio Livestock Waste Management Guide, which goes into more detail concerning BMPs for attaining this end. See note 353.

Soon after the two advisory committees developed advisory standards and regulations for agricultural and urban sediment (which OEPA lacked jurisdiction to implement or enforce), legislation was proposed that would authorize the Division of Soil and Water Districts to implement the standards and regulations and enforce compliance with them.[355] The legislation was introduced in the 1975-76 legislative session[356] and failed to pass. It was reintroduced in the 1977-78 session and amended so as to remove enforcement provisions for agricultural pollutants other than animal wastes.[357] The new Ohio act was passed September 1978 and will become effective in January 1979.[358]

The new Ohio act defines agricultural pollution to mean failure to use management practices in farming or silviculture to abate soil erosion or water pollution by animal wastes or sediment, including substances attached thereto.[359] It directs the Division of Soil and Water Districts to adopt rules for abatement of agricultural pollution and urban sediment pollution,* subject to the approval of the Soil and Water Commission[360] and in consultation with agricultural and urban sediment advisory boards identical to the ones created by the preexisting law.[361]

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* The Division's urban sediment control rules are not enforceable. They are not applicable within municipal corporations (which may have enforceable sediment control ordinances) or within those counties that exercise their authority to adopt sediment control rules by referendum, which may contain specified enforcement provisions.

With respect to agricultural pollution abatement, the new act directs the Division to establish technically feasible and economically reasonable management and conservation standards plus criteria for practices to abate soil erosion and water degrading sediment, including substances attached to sediment. These rules would require time-phased achievement (over a period of years) of permissable soil loss limits established by USDA. However, after the initial phase, no more stringent phase could be applied before Division study of its economic impact and at least one public hearing on such study in each conservation district.[362] It also directs the division to establish (1) technically feasible and economically reasonable standards to achieve a level of management of concentrated animal feeding operations on farms which will abate water degradation, and (2) criteria for determining the acceptability of such management practices.[363]

The new act directs the Division to establish procedures for administration of rules for agricultural and urban sediment pollution abatement and for enforcement of the rules for animal waste management.[364]

The act directs the Division to specify the particular agricultural pollution abatement practices (including both sediment control and animal waste management practices) eligible for State cost sharing *and determine

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* No urban sediment control practices can be eligible for cost sharing.

limits on cost sharing such practices, conditions for eligibility, construction standards and maintenance requirements. But the specified practices must be enduring improvements requiring capital expenditures likely to exceed economic returns resulting from their installation.[365]

The act also directs the Division to cost share with landowners on specified practices when moneys are appropriated and available for such purposes.[366]

The act futher directs the Division to enter into cooperative agreements with any conservation district to carry out its agricultural pollution and urban sediment abatement rules and orders. The Soil and Water Conservation Commission must approve the terms of the agreement.[367]

Although earlier versions of the bill that became the new act had enforcement provisions for violations of all agricultural pollution abatement rules, the act,as passed,provides for inspection (by agreement or under court warrant)[368]and issuance of compliance orders[369]for violations of rules related to animal waste management only. Ohio officials believe the bill was amended partly because the legislators believe EPA will not insist that Ohio's 208 plans contain regulatory programs for agricultural pollutants other than animal wastes.[370]

The act forbids issuance of an order requiring an eligible practice to abate animal waste pollution existing at the time of the adoption of the standards unless public cost sharing money is available at the rate of 75 percent of the cost, but not more than $5,000 per person.[371]

All persons who fail to comply with a final compliance order are guilty of a minor misdemeanor (each day of noncompliance constituting a separate offense)[372] and will be prosecuted for such violation if requested by the Division.[373] However, any person claiming to be deprived of a right or legal protection by a compliance order (or other order of the division except an order adopting a rule) may appeal to the Court of Common Pleas. The court may affirm, modify, or vacate the Division's order. Its decision is final, unless appealed to a higher court and reversed, vacated or modified on appeal.[374]

New York

New York's 1975 amendment to its Soil and Water Conservation District Act is the only one of the new State statutes that deals exclusively with agricultural NPS pollution and specifically addresses itself to all possible sources of such pollution. The New York statute provides that the State's soil and water conservation districts must (by January 1980) provide a soil and water conservation plan for (1) every landholding of more than 25 acres used for raising any agricultural or forestry products and (2) "concentrated animal operations" of less than 25 acres.[375,376]*

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* The statutory definition of a concentrated animal operation is "any form of agricultural operation, including feedlots and poultry operations, which produces, because of its confined nature, large amounts of animal and related wastes in a limited area, as defined by the State Soil and Water Conservation Committee." See note 376.

The plans that the districts are required to prepare must provide "an orderly method" for landowners and occupiers to follow to reduce not only soil erosion, but "the amount of pollutants entering into the waters or on the lands of the State."[377]

All land owners or occupiers are required to apply by the same date, January 1, 1980, to the appropriate district for the plan for the land under their ownership or control.[378] All plans are to be reviewed at least once every 5 years and district directors are responsible for establishing priorities for development and review of plans.[379]

The New York statute thus provides that the State's conservation districts must reorient their mission from only soil erosion prevention to agricultural pollution control and gives the districts 5 years to develop individual BMPs for every farm in the State. In 1976, the State's Department of Agriculture and Markets, which had never previously contributed any money to the districts, budgeted and contributed $80,000 to the districts for this purpose from its own general purpose funds. In 1977, the Department's contribution was raised to $160,000 and, in 1978, to $180,000.*[380]

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* New York is a State in which the legislature generally appropriates no funds for conservation district operations, although the New York Soil and Water Conservation District law authorizes the districts to receive money from the State. The New York law resembles the Wisconsin law in that it authorizes the counties to create the districts and appoint the district governing body. Section 223 of the New York County Law authorizes the counties to appropriate money for district operations and they have recently been doing so at an annual rate of about $1.3 million.

Although the New York statute provides that the district board must review the plans every 5 years, it makes absolutely no provision for enforcement--not even provision for inspection. But Willard Croney the Executive Secretary of the State's Soil and Water Conservation Committee expects that New York pollution control-oriented plans will be used as the basis of locally initiated land use regulations containing such provisions in areas where the people of the locality are convinced that such ordinances are necessary.[381]

New York's Soil and Water Conservation Districts Law makes no provision for adoption of land use ordinances by either the district or the county. But since New York is the strongest of home rule States, there is no question that some level of local government has the power to enact such ordinances. The only question is whether this can only be done by the town (the smallest unit of local government in rural areas and the one responsible for land use planning and zoning) or whether it can or should be done by the county.

The county is the unit of local government responsible for (1) creation and funding of soil conservation[382] and small watershed districts,[383] and (2) funding the county extension service and other agriculture-oriented activities.[384] The county is also responsible for establishing sewer, drainage and refuse districts[385] and may participate in regional water resources planning,[386] but it has no land use regulation authority.

There is no question that towns have authority to enact zoning ordinances to require agricultural lands and concentrated animal operations to comply with district pollution control plans,[387] provide funding for administration,[388] provide access of landowners and occupiers to a board of appeal for variances,[389] and provide enforcement procedures, including prosecution for a misdemeanor and action for a restraining order by town officials or (if town officials refuse to act) taxpayers.[390]

Illinois

Illinois is another State that recently amended its Soil and Water Conservation District Law to initiate a Statewide pollution control-oriented planning program. The Illinois law,[391] which took effect January 1, 1978, is not concerned with agricultural pollution (unlike the New York law), but with erosion and sedimentation damage from "land-disturbing activities," including both development-related and agricultural activities. Like the New York law it does not attempt to provide an enforceable regulatory program meeting EPA's SAM-31 requirements. But it goes further than the New York law in providing for application of publicity-generated pressure on landowners and occupiers to obtain voluntary compliances.

So far as construction-oriented activities are concerned, the Illinois statute resembles the New York Law in providing for preparation of BMPs, that, although not enforceable by the State, can be enforced by local land use regulations. (Indeed, the statute explicity states that "this Act shall encourage the establishment of sediment and erosion control ordinances at the municipal and county levels." 392)

However, although Illinois is one of the States whose district enabling law authorizes the districts to adopt land use ordinances, it is extremely unlikely that this authority will be used to enforce BMPs for agricultural activities. Enactment of a district land use ordinance requires a favorable vote of 75 percent of those voting in a referendum restricted to landowners[393] (the persons to be regulated). Furthermore, in Illinois, unlike New York, general-purpose local governments can not regulate agricultural uses. Both the Illinois County Zoning Law[394] and Township Zoning Law[395] specify that they may not be used to regulate agricultural land use and the Illinois Municipal Code states that its authority is restricted to lands within corporate limits and contiguous territory no more than 1 1/2 miles outside such limits.[396]

The Illinois statute closely resembles the original Model State Erosion and Sediment Control Act (without its enforcement provisions) but makes provision to avoid interfering with local regulatory authority. It authorizes a comprehensive State program and district programs and standards consistent with it to deal with erosion and sedimentation from "land-disturbing activities." Land disturbing activities are defined in the same language as the Model Act, except that exemptions include not only minor activities, such as home gardens and landscaping, repairs, and maintenance, but "any plot or subdivision approved by municipal or county units of government."[397] No other land uses subject to regulation by general-purpose local governments are exempt from inclusion in district programs, if the land is within the district. However, for a period of 2 years, any incorporated or unincorporated city or village can remove all or part of its land from the district.[398]

The Illinois statute directs the State's Department of Agriculture* to develop and coordinate a comprehensive State erosion and sediment control program, including guidelines to be used by the districts in implementing the program. The Department may seek the assistance of the districts and also local, State and Federal agencies in developing the State program.[399] The State program is required to include a means of adequately financing the increased district and Departmental work load needed for its implementation.[400]

Before adopting the guidelines required in the State program, the Department is required to give 30 days notice to the district and other interested persons and hold public hearings.[401] In language that follows the Model Act very closely, the guidelines are required to be based on relevant physical and developmental information concerning the watersheds and drainage basins of the State including land use, soils, hydrology, geology, size of land area being disturbed, transportation, public facilities and services.[402] The guidelines are also required to include any survey of lands and waters that the Department considers appropriate or that is required by "any applicable law" to identify areas with erosion and sedimentation problems.*[403,404] In addition, the guidelines are required to include criteria, techniques and methods for controlling sedimentation from various types of soils and land use.[405]

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* In Illinois the State organization responsible for coordinating and assisting conservation district activities is the Department of Agriculture's Bureau of Soil and Water Conservation.

The statute provides no deadline for development and adoption of the State program, but it requires every conservation district in the State to develop and adopt its own program and standards within 2 years of adoption of the State program and submit them for approval to the Department.[406] As in the Model Act, the Department has backup authority to adopt a program and standards if the district does not.[407] The Department also has authority to adopt standards (which the land disturber may elect instead of district standards) for activities on State lands by State agencies or on lands in more than one district.[408]

As in the Model Act, the districts are required to name and consult with advisory committees representing various land-use interests in developing their programs and standards. They are also entitled to receive assistance from the Department if they request it.[409]

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* Both the physical and developmental data and the surveys of land and waters required by the State program are also required for approval of the State's 208 plan. It is expected that the Department's Bureau of Soil and Water Conservation and the State 208 agency's subcommittee on erosion and sedimentation will use the same data to meet their respective responsibilities. This will mostly consist of existing data compiled by SCS as part of its Conservation Needs Inventory, River Basin Investigations and Soil Survey. See note 404.

District programs are required to include "conservation standards"*[410] for various types of soils and land uses as well as criteria, guidelines, techniques and methods for various types of land-disturbing activities.[411] Both programs and standards must be technically feasible, economically reasonable, and consistent with the State program and guidelines.[412] Conservation standards may not be adopted or revised without due notice and a public hearing.[413]

The Illinois statute (unlike the New York law) makes no provision that persons engaged in land-disturbing activities must apply to the district for a plan for their lands or activities. But district programs and standards must be made available for public inspection and provided to any person on request.[414]

Once standards are adopted, the district "shall encourage" all persons engaging in land-disturbing activities (other than permitted surface mining) to comply with them to do so.[415] In addition, the statute says that each district's program "shall provide for the sharing by the district of part of the cost of enduring**erosion and sediment control devices, structures and practices." (This rule also applies to the Department in cases where activities are performed on land in more than one district.[416])

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* The term "conservation standards" is really not defined in the Illinois Act, but the standards are expected to be soil loss limits.

** Enduring means designed to control erosion and pollution for a period of more than 1 year.

When a land-disturbing activity does not comply with standards, the district (or Department) shall suggest such modifications, terms, and conditions as will enable the person engaged in the land-disturbing activity to comply with the standards.[417]

The Illinois statute also provides a procedure for processing "complaints for sediment and erosion damages."[418] The statute does not specify who may file such a complaint, but states that all complaints shall be filed with the district (or if appropriate the Department). The District shall notify the landowner and occupier and seek consultation with such person or persons to determine whether the standards are being observed. If the district determines that the landowner and occupier are in violation of the standards, it shall notify them and seek voluntary compliance.[419]

If a schedule for compliance has not been entered into within 1 year of notice of violation, the district board shall hold a formal hearing to determine the reason for noncompliance. The district board shall publish its findings and make them available to the Department. The Department shall review the complaint and the district board's findings and may, if in its opinion a violation exists, hold a formal hearing to determine why standards are not being observed. The Department shall publish and make available its findings.[420] Both the districts' and Department's final decision is subject to judicial review.[421]

The Illinois statute's cost sharing provisions are a little difficult to interpret. The statutory language is mandatory. It does not say that district programs "may" but that they "shall" provide for district cost sharing of enduring practices. However, it does not say that districts shall provide cost sharing for all enduring practices. Neither does it distinguish between cost sharing for farmers and cost sharing for developers of shopping plazas.

Joseph Berta, Chief of the Department's Bureau of Soil and Water Conservation, reports that the statutory language was deliberately left ambiguous by the legislators who felt they did not know enough about the content of the State and district programs to make strict laws on cost sharing for their implementation. However, Berta believes that the language will be interpreted to mean that all district programs will include cost sharing for some enduring practices and that selection of practices and percent levels of assistance for cost sharing will be decided on the basis of local conditions. Berta believes that cost sharing will be mainly for farmers. He thinks it is improbable that any cost sharing funds will be made available to commercial builders, in part because the practices district programs would require of builders would mainly be temporary practices to control erosion during the construction period. But he would not rule out the possibility that some cost sharing funds might be made available to persons other than farmers.

Berta expects the Department will ask for a State appropriation for cost sharing after the State program (which was in process when this was written) is prepared. Like other State officials charged with responsibility for Statewide programs concerned with soil conservation as well as pollution control, he expresses concern about coordinating this program with the section 208 program. Federal cost sharing funds, which are required by law to be used only as recommended in approved 208 plans, will be used only in areas where agricultural NPS pollution has been identified as a significant part of the total water pollution problem. State cost sharing funds, when appropriated, will be used to check soil erosion and water pollution throughout the State.

South Dakota

In South Dakota a regulatory program similar to the program outlined in the original Model State Act for Soil Erosion and Sediment Control* is scheduled to reach the phase of adoption of enforceable conservation standards by all conservation districts in early 1979.

This program is authorized by a July 1976 enactment.[422] The enactment also repealed the sections of the State's 1937 Soil Conservation District Law that had authorized the districts to adopt and enforce land use ordinances.[423] These sections (based on sections 9 through 12 of the Standard State Soil Conservation District Law) were repealed because South Dakota officials and legislators disliked the burdensomeness of the referendum method of adopting an ordinance. (Adoption of an ordinance under section 9 had required a favorable vote of at least two-thirds of those voting in the referendum representing two-thirds of the acreage in the district.) Officials and legislators also disliked the cumbersomeness of the board of adjustment procedures.[424]

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* The South Dakota "act to regulate land disturbing activities" and other State laws based on the Model Act, such as Illinois, South Dakota, and Hawaii, purport only to control soil erosion and sediment pollution. The NACD alternative provisions (discussed supra pp. 99-102) would extend the Model Act's coverage to polluting substances transmitted or associated with sediment (such as nutrients, pesticides and pathogens) plus salt in irrigation return flows and animal wastes. No new State NPS control laws have been enacted since the alternative provisions were proposed.

The South Dakota Act requires the State Conservation Commission to develop comprehensive guidelines within 12 months of the enactment "with full opportunity for citizen participation."[425] The guidelines are to consist of recommended soil loss limits and suggested conservation standards.[426] They are required to be formulated on the same three bases required by the Model Act and the Illinois law: (1) relevant physical and development information regarding watershed and drainage basins, (2) existing surveys of lands and waters identifying areas with erosion and sedimentation problems, and (3) conservation standards (including both soil loss limits and suggested practices) for various types of soils and land uses.[427] (The guidelines adoption process was completed in July of 1977.)

The South Dakota Act requires conservation districts to develop proposed conservation standards within 12 months of adoption of the State guidelines (by July of 1978), unless the Commission grants a district a variance to allow it additional time.[428] Districts must develop proposed standards in cooperation with affected local governments and give due notice and conduct a public hearing on the proposed standards before adopting them.[429]

Proposed standards must also be transmitted to the Commission for review and comment. [430] All districts are required to adopt conservation standards in cooperation with other local government units within 3 months of the Commission's review.[431] But the districts are not required to accept the Commission's recommendations and there is no provision that the Commission can adopt standards for the district if the district fails to do so.

Revision of the conservation standards may be proposed by a petition signed by 10 percent of the district's voters who voted in the last election for supervisor. Revision shall take effect, after a hearing, on approval by the supervisors.[432] There is no provision that revisions must be reviewed by the Commission.

The South Dakota Act does not provide for preparation of erosion and sediment control plans or issuance of permits for construction-related or other nonagricultural land-disturbing activities.[433] However, it does require that all local government units within the district normally responsible for granting or issuing zoning or building permits include provisions in their permit procedures to ensure compliance with district conservation standards.[434] It gives these "permit-issuing authorities" the same enforcement responsibilities and authorities respecting their permittees that it gives the districts respecting agricultural land disturbers.[435]

Plans are not required for agricultural activities or minor land disturbing activities, such as home gardening, unless the conservation district determines that a particular land disturber is violating adopted conservation standards.[436] In such case the land disturber is required to prepare an erosion and sediment control plan approvable by the district within 6 months and to implement such plan within 6 months of approval.[431]

The district may grant the land disturber a variance to allow more time for either plan preparation or implementation.[438]

Any person adversely affected by land disturbing activities (defined by the act to include public agencies and citizens associations[439]) may file a petition alleging a violation with the district. If a petition is filed, the district must investigate its validity, take appropriate action, and advise the petitioner of the disposition of his petition within 2 months.[440]

The district is authorized to enforce its orders by bringing an action for an injunction "or other appropriate relief" either on its own initiative or on petition. There is no provision for criminal liability or civil liability to adjourning landowners.[441]

The South Dakota Act thus differs from the Model Act not only in making the districts more independent of the Commission but in providing less detail and fewer powers for district administration and enforcement. Thus, the South Dakota Act omits the Model Act provision giving the district authority to make on-site inspections to determine whether farm conservation plans are being followed.[442] This appears to be a significant omission that would be supported if challenged in the courts because the repealed provisions for district land use ordinances, which the South Dakota Act replaced, also provided for district on-site inspection of violations.[443] A. Griffiths, Executive Secretary of the South Dakota Conservation Commission, says that State officials are not sure how this omission will affect the program in practice.

Griffiths says that South Dakota officials have discussed the possibility of a State cost-sharing program but that proposals for such a program will not be made until review of the completed district standards permit a better look at the nature and magnitude of the problem. Griffiths expects South Dakota to use Culver Amendment cost share funds to implement district conservation standards in areas where 208 plans indicate that agriculture-caused sediment is a major water pollution problem. But he points out that the primary function of the South Dakota law is soil conservation on a statewide basis.

Hawaii

In Hawaii, the Department of Health (the State department responsible for environmental quality) is leading an effort to control sedimentation under a combination of two State laws: (1) Act 249, a Soil Erosion and Sediment Control Act,[444] partly based on the Model Act, and (2) the water quality standards and water pollution enforcement provisions of the State's Environmental Quality Act.[445]

Act 249 was enacted in 1974 in response to the legislature's perception that sediment from urban and highway construction and unprotected agricultural land was causing damage to fish and wildlife, recreation, and navigation throughout the State. The legislature was aware that all Hawaiian counties had adopted or were preparing sediment control ordinances and that the City and County of Honolulu already required State Department of Health approval of all grading work. The Act was intended to assure that county ordinances provide consistent conservation standards and coverage of activities and that all State agencies comply with county ordinances.[446]

Act 249 directs the State's four counties to enact erosion and sediment control ordinances, within 1 year of its own enactment, in cooperation with soil and water conservation districts and other appropriate State and Federal agencies.[447]

The county ordinances are required to contain at least four elements, three of which are identical to the Model Act's three requirements for State guidelines for district programs:

> (1) Be based on relevant physical and developmental information concerning the watersheds and drainage basins of the county and/or State including but not limited to data relating to land use, soil, hydrology and geology, size of land area being disturbed, approximate water bodies and their characteristics, transportation, and public facilities and services.[448]
>
> (2) Include such survey of land and waters as may be deemed appropriate by the county or required by any applicable law to identify areas including multi-jurisdictional and watershed areas with critical erosion and sediment problems.[449]
>
> (3) Contain standards for various types of soil and land uses, which standards shall include criteria, techniques, and methods for the control of erosion and sediment resulting from land-disturbing activities.[450]

The fourth required element is:

> Include a provision whereby standards shall be deemed met if it can be shown that the land is being managed in accordance with soil conservation practices acceptable to the applicable soil and water conservation district directors, and that a comprehensive conservation program is being actively pursued.[451]

Hawaiian officials refer to requirement (4) as the "agricultural exclusion clause," although it is not specifically restricted to agricultural lands.[452] Apart from the agricultural exclusion clause, Act 249 gives the county governments complete discretion to adopt whatever institutional machinery they consider appropriate to implement conservation standards.*[453]

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* In practice all four county ordinances have similar permit systems for nonagricultural activities with similar enforcement provisions.

Act 249 directs the Department of Health to adopt conservation standards (one element of the Model Act's State guidelines) within 90 days of enactment.[454] Unlike the Model Act, the Hawaiian Act does not specify that local regulatory programs must be consistent with State standards. In fact, however, all the county ordinances are drawn up to administer and enforce county standards based on the Department's conservation standards.[455] Act 249 also provides that if any counties fail to enact erosion and sediment control ordinances within the statutory period, the Department of Health has backup authority to promulgate effective rules and regulations for such counties within 180 days thereafter.[456]

The Department promulgated State conservation standards in the form of Public Health Regulations Chapter 37-B in September 1974.[457] Chapter 37-B sets forth a basic principle to be applied to all land-disturbing activities. This is that the stringency of conservation technology shall be based on a severity rating number representing the potential erosion and sediment problem caused by the particular land-disturbing activity. When the severity rating number for a particular activity indicates average environmental hazard, best practicable technology (BPT) is required. But when the number indicates an above average hazard, a higher degree of control may be required, including in some cases drastic scaling down or even avoidance of the activity. The Director of Health may reduce such higher requirements to BPT, however, if he determines that State waters will be minimally affected by the additional sedimentation.

Chapter 37-B instructs each county to develop its own severity rating number system according to guidelines proposed by the Hawaii Environmental Simulation Laboratory. The basis for severity rating numbers shall be (1) the soil loss calculated from a Hawaiian modified version of the universal soil loss equation, and (2) the effect of resulting sedimentation on the channel and flood plain and the water quality in the stream and the coastal waters into which it drains. Water quality effects are to be judged on the basis of the State water quality standards and other pertinent State and Federal law.[458]

Both Act 249 and Chapter 37-B define land-disturbing activities in the language of the Model Act as including but not limited to "tilling, clearing, grading, excavating, transporting and filling of land."[459] However, the four very similar county ordinances provide permit system regulation for three specific activities:[460]

(1) Grading (defined to mean excavation or fill or any combination thereof).

(2) Grubbing (uprooting or clearing vegetation). This includes not only uprooting vegetation to prepare sites for crop cultivation, as in mainland agriculture, but the most prevalent method of harvesting sugar cane.

(3) Stockpiling (defined to mean temporary open storage of earth materials).

Although the wording of the ordinances does not appear to provide for permit regulation of ordinary planting, tilling and harvesting, Hawaiian officials say that they regard as grading all harvesting that opens the soil to erosion until the next crop is well established.[461]

Neither the Hawaiian Department of Health nor the counties expect to implement conservation standards for agriculture through permit procedures set up by the ordinance, however.[462] All the county ordinances have their own agricultural exclusion clauses as required by Act 249. These provisions state that conservation standards shall be deemed met if agricultural (and in some counties other) lands[463] are managed according to conservation district-approved practices under a comprehensive conservation program. The four county agricultural exclusion clauses add the provision that operations under conservation plans will still require a grading permit if they alter the drainage pattern of abutting properties.[464]

The 15 Hawaiian Soil and Water Conservation Districts have agreed that comprehensive conservation programs will include a combination of approved conservation practices that can also serve as BMPs for the agricultural NPS element of the State's water quality management plan.[465] But, unless the courts are willing to agree that harvesting can be considered grading, the county ordinances cannot be used to enforce implementation of district-approved BMPs for all types of agricultural activities. They clearly do provide means that can be used, if necessary, to enforce BMPs for sugar cane operations. District conservation programs are now promoting a gradual changeover from furrow to drip irrigation to make possible a change to flat harvesting (cutting cane and leaving protective stubble) instead of the highly erosive practice of harvesting by grubbing.[466]

Another possible means of enforcing compliance with district conservation programs is provided by Section 342 of the Hawaiian Environmental Quality Act. This section authorizes the Director of Health to promulgate regulations establishing water quality standards[467] "to receive and initiate complaints of water pollution," hold hearings in connection with water pollution, and institute administrative and legal proceedings in the name of the State for the prevention, control, or abatement of water pollution.[468]

Public Health Regulations Chapter 37-A establishes water quality standards pursuant to this authority. The standards for sedimant in all State water areas are as follows:

> Substances and conditions or combinations thereof in concentrations which produce undesirable aquatic life.
>
> All waters shall also be free from soil particles, resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands. This standard shall be deemed met if it can be shown that the land on which the erosion occured or is occurring is being managed in accordance with soil conservation practices acceptable to the Director, and that a comprehensive conservation program is being actively pursued, or that the discharge has received the best degree of treatment or control practicable under existing technology. The determination of compliance with the standard shall be made to the Director, consistent with the Hawaii Administrative Procedure Act and the Rules of Practice and Procedure of the Department of Health.[469]

When read together with Act 249, chapter 37-B, and the county ordinances, this water quality standard means that all persons responsible for land use operations resulting in sedimentation into State waters, who are not operating in compliance with county permits or soil and water conservation district programs, may be subject to Department of Health Administrative procedures and court actions against water quality standards violators.

In such case they must sustain the burden of proof that their operations are not causing eutrophication of such waters.

Because Hawaii's rivers are short, preservation of Hawaii's beaches and coastal ecology was the principal reason for passage of Act 249. Hawaiian agriculturalists are inclined to agree with urban interests that water pollution is as important a problem as soil erosion, and Hawaiian officials do not think (as officials in some other States do) that there is an inconsistency between the purposes of the Statewide erosion control program and special sediment control programs for critical areas identified by the 208 program.[470]

Jacqueline Parnell, Department of Health 208 Project Director, says that environmentalist public opinion is so strong in Hawaii that it will probably not be necessary to use legal penalties to compel compliance with conservation district programs expected to serve as BMPs for section 208 management programs. She adds that much of Hawaiian agriculture is corporate agriculture and that the same companies that own pineapple and sugar cane plantations often own hotels on vulnerable beaches.

Parnell says the availability of public cost sharing is not expected to be an important factor in achieving compliance with BMPs because Hawaii's mainly large-scale growers are accustomed to absorbing the costs of complying with environmental regulations. Hawaiian growers have never made much use of the ACP because that program's recent grant limit of $2,500 per farm per year lessened its utility to large-scale operations.

Section 35 of the Clean Water Act of 1977 contains no individual grant limit, however, and Hawaiian officials have recommended that cost sharing be made available to both large-scale and small-scale operations for implementing 208 plan BMPs.[471] The Rural Clean Water Program (RCWP) regulations promulgated by the Secretary of Agriculture in November 1978 does set a cost share limit, but, since it is higher than the ACP limit, it should provide some incentive to large scale operators. The RCWP limit on total payments to one land operator over the entire 5 to 10 year contract period is $50,000. Additional payments can only be provided when the main benefits of the cost shared practices are essential to achievement of the RCWP project area's water quality objectives.[472]

No proposal is now being made for a State cost sharing program. But the State's nonpoint source technical advisory committee has recommended that the State legislature make a substantial addition to its very modest current appropriations to the conservation districts. The purpose of the additional appropriation would be to enable the conservation districts to hire sufficient technical field staff and office staff to operate as effective 208 management agencies.[473] Currently all technical assistance for conservation plan development and review is performed by Federal personnel from the State's seven SCS district offices and the administrative work is largely performed by the unpaid conservation district directors.[474]

Virgin Islands

Another jurisdiction that is carrying out an erosion/sediment control program, more for the purpose of protecting coastal waters than soil fertility, is the Virgin Islands. The 1971 Virgin Islands Environmental Protection, Soil and Shore Erosion Control law exempts "cultivation of land for agricultural purposes under approved soil and water conservation practices" from the requirement of obtaining an Earth Change Permit* before commencing any land-disturbing activity.[475] This means that farms without conservation plans are in violation of the law with regard to earth-disturbing agricultural practices and are theoretically subject to its requirements and penalties.

In fact, all agricultural lands are in conservation plans. (There are fewer than a hundred agricultural operations on the islands, most of them involving pasture and range, and only 500 acres of cultivated land.) The SCS conservationist assigned to the Virgin Islands Soil and Water Conservation Districts reports that the few cases where operators were not maintaining their conservation plans have been successfully negotiated. Although there is no provision in the Virgin Island statute for district inspection of compliance with conservation plans, land operators have allowed such inspection on a voluntary basis.[476]

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* This permit is based on an Earth Change Plan approved by the Virgin Islands Soil and Water Conservation District.

1. 91 Stat. 1566, 33 U.S. §1251 (Supp. V 1975).
2. Iowa Code Ann. §§467A.42-53 (1977-78 Cum. Supp.).
3. Ohio Rev. Code Ann. §§1515.01-1515.30 (Page Supp. 1976).
4. Sec. 402, Federal Water Pollution Control Act Amendments of 1972. 33 U.S.C. §1342 (Supp. V 1975). (Hereinafter all citations to this statute will consist of a section of the Federal Water Pollution Control Act except where given in the text, and the corresponding section of the U.S. Code).
5. Sec. 301(b)(1)(2), 33 U.S.C. §1311(1)(2).
6. Sec. 45, Pub. L. 95-217, 91 Stat. 1516, 1585 (1977), 301(i) Federal Water Pollution Control Act as amended. (Hereinafter citations to this statute will consist of a section of Pub. L. 95-217, except where given in the text, and the corresponding section of the Federal Water Pollution Control Act).
7. Sec. 42(a), §301(b)(2)(E).
8. Sec. 42(a), §301(b)(2)(C)(D).
9. Sec. 42(a), §301(b)(2)(F).
10. Sec. 101(a), §33 U.S.C. 1251.
11. Sec. 101(a)(2), §33 U.S.C. 1251(a)(2).
12. Sec. 101(a)(5), §33 U.S.C. 1251(a)(5).
13. 33 U.S.C. §1288.
14. 33 U.S.C. §1313(e).
15. Sec. 502(14), 33 U.S.C. §1362(14).
16. See criteria used by EPA in distinguishing silvicultural point from nonpoint sources, 41(119) Fed. Reg. 24709, 24710 (1976).
17. 38 Fed. Reg. 18000 (1973).
18. *See* *National Resources Defense Council* v. *Train*, 396 F. Supp. 1393, 7 E.R.C. 1881 (D.D.C. 1975).
19. *Id*.
20. 41(54) Fed. Reg. 11458 (1976), 40 C.F.R. §§124-25 (1977).
21. 41(134) Fed. Reg. 28493 (1976).
22. 41(54) Fed. Reg. 11303 (1976), 40 C.F.R. §§124-25 (1977).

23. 41(119) Fed. Reg. 24709 (1976), 40 C.F.R. §§124-25 (1977).

24. 41(134) Fed. Reg. 28493, 28495 (1976).

25. Secs. 208(b)(2)(F), 402, 502(14).

26. Staff Report to the National Commission on Water Quality IV-22 (1976); Midwest Research Institute and Hittman Associates, Inc., Methods for Identifying and Evaluating the Nature and Extent of Nonpoint Sources of Pollutants 240 (EPA-43019-75-014, 1973).

27. K. Porter et al. (New York State College of Agriculture and Life Sciences), Nitrogen and Phospherus, Food Production, Waste, and the Environment 15-16, 82-84, 210-13 (1975).

28. Midwest Research Institute, et al., supra note 26, at 1.

29. Staff Report, supra note 26, at IV-22, IV-30.

30. Id. at IV-30.

31. Id. See also U.S. Department of Agriculture Planning Staff, North Coastal area of California and Portions of Southern Oregon—Main Report on Sediment Yield and Land Treatment 65-69 (1972).

32. U.S. Environmental Protection Agency, National Water Quality Inventory 3 (1975); U.S. Council on Environmental Quality, Environmental Quality 1974, at 284-87 (1974).

33. Midwest Research Institute et al., supra note 26, at VII.

34. Staff Report, supra note 26 at IV-19, IV-38.

35. Id. at IV, 24 to 25.

36. Midwest Research Institute et al., supra note 26 at VIII.

37. EPA, supra note 32 at 8.

38. Sec. 101(a)(5), 33 U.S.C. §1251(a)(5).

39. 33 U.S.C. §1281(c).

40. 33 U.S.C. §1288.

41. 33 U.S.C. §1313.

42. 33 U.S.C. §1313(e).

43. H.F. Wise and Associates, Institutional Assessment of the Planning Requirements of the Water Pollution Control Act Amendment of 1972 at III-33 (NTIS PB 244 907, 1975).

44. 1976-79 funding figures contributed by members of the Water Planning Division Office of Water and Hazardous Materials, EPA.

45. National Association of Regional Councils v. Train et al., 8 E.R.C. 2025 (D.D.C. 1977).

46. National Association of Regional Councils v. Costle et al., 10 E.R.C. 1633 (D.D.C. 1977).

47. Sec. 208(b)(1)(B)(a).

48. Sec. 208(b)(1)(B)(b)

49. Sec. 35, §208(j).

50. Wise and Associates, supra note 43 at III-1 to 6, III-12 to 15.

51. Id. at III-14 to 15.

52. 33 U.S.C. §1314(e).

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55. U.S. Environmental Protection Agency, (1) Areawide Waste Treatment Management Planning Agencies, Interim Grant Regulations, 39 Fed. Reg. 17202 (1974); (2) Draft Guidelines for Areawide Waste Treatment Management (1974).

56. Wise and Associates, supra note 43, at III-19.

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58. U.S. Council on Environmental Quality, Environmental Quality—1974, at 148 (1974); Wise and Associates, supra note 43, at III-19 to 20.

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60. U.S. Environmental Protection Agency, Water Quality Strategy Paper 8 (second edition 1974).

61. U.S. Environmental Protection Agency, Water Quality Strategy Paper 15 (third edition 1975).

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64. 396 F. Supp. 1386, 7 E.R.C. 2066 (D.D.C. 1975).

65. _Natural Resources Defense Council, Inc. et al._ v. _Train_, Civil Action No. 74-1485 (D.D.C. 1975).

66. Sec. 208(b)(1)(B).

67. 40 C.F.R. §35 (1977).

68. 40 C.F.R. §130 (1977).

69. 40 C.F.R. §131 (1977).

70. 40 C.F.R. §§130, 131 (1977).

71. 40 C.F.R. §130.11 (1977).

72. _Id_. at .14.

73. _Id_. at .34.

74. _Id_. at .30-.31.

75. _Id_. at .16(c).

76. _Id_. at .16(d).

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78. 40 C.F.R. §131.20(f)(iii) (1977).

79. _Id_. at .20(f)(i)(iv).

80. _Id_. at 20(h).

81. _Id_. at .11(d).

82. _Id_. at .11(j).

83. 40 C.F.R. §35.230 (1977).

84. B. Holmes, A History of Federal Water Resources Programs and Policy, 1961-1970, at ch. 8 (unpublished manuscript, to be published in USDA Misc. Pub. series 1979); J. Montgomery 1976(2), Univ. Ill. Law Forum 539-40.

85. *See* N.W. Hines, Public Regulation of Water Quality in the United States 457-58 (NTIS 208 309, 1971) and the cases cited therein. The most pertinent case is *United States* v. *Standard Oil Co.*, 384 U.S. 224 (1966), in which the Supreme Court ruled, that pollution of navigable waters could be regulated whether the pollution had any effect on navigability or not.

86. J. Montgomery, supra note 84.

87. *See* H.R. 3510, 94th Cong., 1st Sess. (1975).

88. *See* F. Bosselman, D. Callies, J. Banta, The Taking Issue (Council on Environmental Quality 1973).

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90. A. Reitze, Environmental Planning 18-21 (1971).

91. *See* P. Glick, The Coming Transformation of the Soil Conservation District, Journal Soil and Water Conservation 47, n3 (1967).

92. Aronoff and Schukert, supra note 88, at 35-36.

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95. 33 U.S.C. §1314(j).

96. 38 Fed. Reg. 32288 (1973).

97. Guidelines, supra note 93, at 2-16 to 2-23; 40 C.F.R. §130.34(c), (1977).

98. Guidelines, supra note 93 at 2-21 to 2-22.

99. at 32-33.

100. Memorandum of Working Relationship between the Environmental Protection Agency and the Department of Agriculture for Development and Implementation of a Model Implementation Program for Water Quality Management, signed by D. Costle, Administrator, EPA, on July 21, 1977 and B. Bergland, Secretary, USDA, on Sept. 16, 1977.

101. Interview with W. Sallee, ASCS member, 208 work group.

102. Interview with G. Welsh, SCS member, 208 work group.

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113. 43 Fed. Reg. 26730 (1978).

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118. Extension Committee on Organization and Policy, The Cooperative Extension Service 4 (1974).

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163. W.D. Anderson, The Role of State Regulatory Power in the Implementation of National Natural Resources Policy (1971, unpublished manuscript in files of Natural Resource Economics Division, ESCS).

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166. A good example of this is the Wisconsin Soil and Water Conservation District Law, Wis. Stat. Ann., ch. 92. Originally enacted 1937, it was amended in 1955 to give the State soil conservation agency and the districts authority to sponsor SCS-assisted small watershed projects. It was amended in 1972 to require that district conservation plans in counties included in regional planning commission jurisdictions be consistent with planning commission plans. See pocket part for 1977 §92.08.

167. Standard Act §8; Davey, supra note 161 at 6.

168. Davey, supra note 161 at 24, 204-11.

169. *Id.* at 24, 204-06.

170. Id. at 24, 206-09.

171. Sec. 35, §208(j).

172. 43 Fed. Reg. 26740 (1978).

173. Davey, supra note 161, at 24, 212-218.

174. Ala. Code Tit. 2, §§664 (1958); Ark. Stat. Ann. §9-910 (1976); Colo. Rev. Stat. Ann. §128-1-9 (1973), Fla. Stat. Ann. §582.21 (1962); Ga. Code §5-2101 (1975); Ill. Ann. Stat. ch. 5, §128 (Smith Hurd 1975); Ky. Rev. Stat. §262.350 (1970); La. Rev. Stat. Ann. §3.1209 (1973); Md. Agric. Code Ann. §8-307(1974); Miss. Code Ann. §69-27-37 (1972); Mont. Rev. Code Ann. §76-109 (1966); Neb. Rev. Stat. §2-1534 (1974); Nev. Rev. Stat. 548.410 (1973); N.J. Stat. Ann. §4: 24-23 (West 1973); N.C. Gen. Stat. §139-9 (1974); N.D. Cent. Code §4-22-27 (1975); Or. Rev. Stat. §568.630 (1975); S.C. Code Ann. tit. 2, §48-9-1510 (1976); Tenn. Code Ann. §43-1519 (1964); Tex. Rev. Civil Stat. Ann. art 165a-5, §8 (1969); Utah Code Ann. §62-1-9 (1968); Vt. Stat. Ann. tit. 10 §724 (1973); VA. Code §21-66 (1975); W. VA. Code §19-21A-9 (1977); Wis. Stat. Ann. §92.09 (1972); Wyo. Stat. 11-246 (1957 & Cum. Supp. 1975).

175. P. Glick, The Coming Transformation of the Soil Conservation District, 22 Jour. Soil & Water Conservation 45, 47 (Mar-Apr. 1976).

176. Standard Act, §10.

177. Id. §11

178. Id.

179. Id. §12.

180. Supra note 174.

181. N.J. Rev. Stat. §4: 24-23 (West 1973).

182. Maryland, Montana, Nevada, North Carolina, North Dakota, Utah, Virginia, Wisconsin.

183. Alabama, Arkansas, Colorado, Florida, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Nebraska, Oregon, South Carolina, Tennessee Texas, Vermont, West Virginia.

184. Glick, supra note 175, at 41.

185. Alabama (80), Arkansas (75), Colorado (50+), Florida (50+), Georgia (50+), Illinois (75), Kentucky (90), Louisiana (66 2/3), Maryland (50+), Mississippi (66 2/3), Montana (50+), Nebraska (60), Nevada (50+), North Carolina (66 2/3), North Dakota (75), Oregon (66 2/3), South Carolina (66 2/3), Tennessee (66 2/3), Texas (90), Utah (50+), Vermont (50+), Virginia (66 2/3), West Virginia (60), Wisconsin (50+), Wyoming (75).

186. Colorado, Florida, Kentucky, Louisiana, Mississippi, Montana, Nevada, North Dakota, New Jersey, Oregon, South Carolina, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin, Wyoming.

187. Colo. Rev. Stat. Ann. §§35-70-110 (1973); La. Rev. Stat. §3.1212 (1973); N.J. Stat. Ann. §4: 24-32 (West 1973); Vt. Stat. Ann. tit. 10 §732 (1973).

188. Fla. Stat. Ann. §582.26 (1962); Ky. Rev. Stat. §262.490 (1970). Miss. Code Ann. §69-27-47 (1972); Mont. Rev. Code Ann. §76-111 (1975); Nev. Rev. Stat. §548.505 (1973); N.D. Cent. Code §4-22-37 (1975); Or. Rev. Stat. §568.770 (1975); S.C. Code §48-9-1840 (1976); Tex. Rev. Civ. Stat. Ann. art. 165a-4 §10 (Vernon 1969); Utah Code Ann. §62-1-12 (1968 and Supp. 1975); Va. Code 21-100 (1975); W. Va. Code §19-21A-11 (1977); Wis. Stat. Ann. §92.12 (West 1972); Wyo. Stat. §11-249 (1957 and Cum. Supp.).

189. Utah Code Ann. §62-1-10 (1968).

190. Anderson, supra note 163, at 16.

191. Wis. Stat. Ann. §92.10 (West Cum. Supp. 1977-78).

192. Ala. Code tit. 2 §665(1958); Ill. Ann. Stat. ch. 5, §129 (1975); Ky. Rev. Stat. §262.420 (1970); Md. Agric. Code Ann. §8-309 (1974); Miss. Code Ann. §69-27-39 (1972); Nev. Rev. Stat. §548.400 (1973); N.J. Stat. Ann. §4.24-27 (West 1973); N.C. Gen. Stat. §139-10 (1974); Tenn. Code Ann. §43-1520 (1964); Utah Code Ann. §62-1-10 (1968); Wyo. Stat. §11-248 (1957).

193. Va. Code §21-83 (1975).

194. Neb. Rev. Stat. §2-1342 (1974).

195. *See* National Association of Conservation Districts, Nonpoint Note No. 15, *in series* Nonpoint Notes on 208 Implementation (1978).

196. National Association of Conservation Districts, SCAMP Information Circular No. 15, Manpower Planning for Erosion and Sediment Control Program (1977).

197. M. White, Memorandum appended to Standard Act, supra note 164, at 35

198. Davey, supra note 161, at iv.

199. Glick, supra note 175 at 49.

200. *See* NACD, supra note 162 for discussion of State, district and general-purpose local government manpower currently employed in carrying out five such programs and additional manpower needed if a sixth should be enacted. Several of the directors of State conservation agencies interviewed for the discussion of Statewide sediment control programs in this paper also said that State appropriations to their agencies and for the districts had been increased to pay for the programs or that such increases were anticipated.

201. Cal. Pub. Res. Code §9506 (West Cum. Supp. 1977); Kan. Stat. Ann. §2-1907b(Cum. Supp. 1976); Ark. Stat. Ann. §9-930 (1976); Ky. Rev. Stat. §262.200 (Cum. Supp. 1976).

202. Colo. Rev. Stat. §2-1907b (Cum. Supp. 1976); Mont. Rev. Codes Ann. §§76-108A (14), 76-209 (Cum. Supp. 1975).

203. Issue bonds and borrow money: Ark. Stat. Ann. §9-932 (1976); Mont. Rev. Codes §§76-108A(12), 76-220, 76-223 (Cum. Supp. 1975). Borrow money: Colo. Rev. Stat. §35-70-108(h); Fla. Stat. Ann. §582.20(10) (West Supp. 1977); Md. Agric. Code Ann. §8-306(a)(16) (Supp. 1976); Neb. Rev. Stat. §2-3228(5)(1974). N.J. Stat. Ann. §4: 24-22(m) (1973); short term notes only, Tex. Rev. Civ. Stat. Ann. art. 165a-487(11) (Vernon 1969); Utah Code Ann. §62-1-8(10) (1953).

204. Wis. Stat. Ann. §59.872 (Cum. Supp. 1977-78).

205. Glick, supra note 175, at 47, n. 3.

206. Anderson, supra note 163, at 22-23, citing S. Voelker, Great Plains Council Pub. No. 5, Land Use Ordinances of Soil Conservation Districts in Colorado 45 (Colo. Agric. Exp. Stat. Tech. Bull. 1952).

207. Id.

208. Olinger v. People of the State of Colorado, 140 Colo. 397, 344 P. 2d 689 (1959).

209. Soil Conservation Districts Act Amendments, ch. 233, 1961 Colo. Sess. Laws.

210. Asphalt Paving Co. v. Board of County Commissioners, 162 Colo. 254, 425 P. 2d 289 (1967).

211. Colo. Rev. Stat. §35-70-112 (1973).

212. NACD, supra note 162, at 73-74.

213. NACD, supra note 160, Information Letter No. 12.

214. Lewis and Clark County District Sediment Control Ordinance No. 77-01, as authorized in Montana Conservation District Law, §76-109 Mont. Rev. Code Ann. (1966). (Hereinafter cited as Lewis and Clark District Ordinance).

215. Id. §6,7.

216. Id. §8.

217. Id. §9.

218. Id. §12.

219. Mont. Rev. Code Ann. §§76-110 (1966).

220. Lewis and Clark District Ordinance, §13.

221. Id. §15.

222. See proposed Lewis and Clark County Ordinance attached to NACD, supra note 159, Information Letter No. 4.

223. Lewis and Clark District Ordinance, §17.

224. Ch. 633, Mont. Sess. Laws (1975).

225. NACD, supra note 160, Information Letter No. 9.

226. Wis. Stat. Ann., Sec. 92 (West 1972 and Supp. 1977-78).

227. Id. §92.09.

228. Id. §92.11.

229. Id. §92.10.

230. A Model Ordinance for Wisconsin Soil and Water Conservation Districts adopting Land Use Regulations for Sediment Control, attached to NACD, supra note 160, Information Letter No. 4, Supp. 1. (Hereinafter cited as Model Ordinance).

231. Vernon County, Wis., Soil and Water Conservation District Land Use Regulation Ordinance for Town of Stering (June 21, 1977). Can be found in NACD, supra note 160, Information Letter No. 4 Supp. 1). (Hereinafter cited as Vernon County Ordinance).

232. Model Ordinance §302(c).

233. Id. §3.02(b).

234. Id. §4.01.

235. Vernon County Ordinance §§302(b), 4.0.

236. Id. 6.0.

237. Id. 3.01(b)(1)(2).

238. Id. 3.01(a).

239. Id. 3.01(b)(3).

240. Id. 6.02(c), 6.03, 6.04.

241. Id. 7.01, 7.02.

242. Id. 7.03.

243. Id. 8.0.

244. League of Women Voters Educational Fund, The Big Water Fight 81-90 (1960); S. Finley, Serving Suburban Interests in Watershed Development (Fifteenth National Watershed Congress, 1967). NACD, supra note 161 at 1, 7, 33.

245. Md. Nat. Res. Code Ann. tit. 8, subtit. 11 (1974 & Cum. Supp. 1976).

246. Model State Act for Soil Erosion and Sediment Control in 1973 Suggested State Legislation, Vol. XXXII, Council of State Governments, Lexington, KY at 11-19. [Hereinafter cited as Model Act].

247. Ga. Code Ann. Secs. 5-23-1a through 5-2313a (1975 Rev. & Cum. Supp. 1977); Hawaii Rev. Stat., Ch. 180-C (1968, Rev. Supp. 1975) Ill. Ann. Stat. ch. 5 §§106-138 (Cum. Supp. 1978); Iowa Code Ann., §§467A.1-467.A.53 (Cum. Supp. 1971, 1977); Mich. Stat. Ann. §§13-1820(1) through 13-1820(17) (1973 & Cum. Supp. 1977); N.J. Rev. Stat. Ann. §§4-24-39 through 4-24-55 (West Supp. 1977); N.Y. Soil & Water Conservation Dist. Law §§3, 7-a (McKinney Cum. Supp. 1977-78); N.C. Gen. Stat. §§113A-50 through 113A-66 (1975, Supp. 1975); Ohio Rev. Code Ann. §§1515.01 through 1515.30; 1501.20 (Page 1964, Supp. 1975); S.C. Code §§63.195.101 through 63.195.106 (1962, Cum. Supp. 1975); S.D. Compiled Laws Ann. §§38-8A-1 through 38-8A-21 (Supp. 1976) VI Code Ann. tit. 12, §§531-538 (Cum. Supp. 1976); Va. Code §§21-89.1 through 21.89.15 (Cum. Supp. 1975).

248. Mont. Rev. Code Ann. §§26-1505 to 26-1523 (Cum. Supp. 1977); NACD, supra note 173 at 94-95.

249. 25 Pa. Code §102 (1972); under 35 Pa. Stat. Ann. §691 (Purdon 1977).

250. Ga. Code Ann. §5-2303a (1975, Cum. Supp. 1977); Md. Nat. Res. Code Ann. §8-1102 (1974); N.C. Gen. Stat. §113A-52 (1975); S.C. Code §48-13-30 (1962, Cum. Supp. 1975).

251. Va. Code §21-89.3 (Cum. Supp. 1975); Mich. Stat. Ann. §13.1820(10)(16) (1973 & Cum. Supp. 1977).

252. Iowa Code Ann. §§467A.42 through 467A.53, §§467D.1 through 468.9 (Cum. Supp. 1977-78).

253. _Id_. §467A.44.

254. _Id_. ch. 467D.

255. _Id_. §467A.43.

256. _Id_. §467D.23.

257. _Id_. §467A.44.

258. _Id_. §467A.42.

259. _Id_. §467A.44.

260. _Id_. §467A.45.

261. _Id_. §467A.47.

262. _Id_. §467A.48.

263. _Id_. §467A.49.

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265. *Id*. §467A.51.

266. *Id*. §467A.50.

267. Iowa Code Ann. §665.4 (Cum. Supp. 1977-78).

268. W. Griener, Cost Sharing with State Funds on Soil Conservation Practices 3, Paper presented at 1978 NACD convention at Anaheim, Ca. (reprinted by Iowa Dept. of Soil Conservation 1978).

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270. Interview with W. Griener.

271. W. Griener, Am. Soc. of Agric. Engin. Paper No. 75-2565, *Mandatory Sediment Control--the Iowa Story* 15, (1975).

272. *McConley* v. *Salmon*, 234 Iowa 1020, 1022, 14 N.W. 2d 715, 716 (1944); *Witke* v. *State Conservation Comm.*, 244 Iowa 261, 266, 56 N.W. 2d 582, 585 (1953); *See also* Fishing and Recreation Rights in Iowa Lakes and Streams, 53 Iowa L.R. 1322 (1968).

273. Interview with W. Griener.

274. *Id*.

275. *Id*.; W. Griener, supra note 268, at 4.

276. Alternative Provisions for Use with the Model State Act for Soil Erosion and Sediment Control *in* National Association of Conservation Districts, Nonpoint Notes on 208 Implementation, Number 4, (1978). [Hereinafter referred to as Alternative Provisions].

277. Interview with M. Garner, NACD consultant on water quality laws.

278. Model Act, §2(a).

279. *Id*. §3.

280. *Id*.

281. *Id*. §4(a).

282. *Id*. §4(b).

283. *Id*. §5(e).

284. *Id*. §7(c).

285. *Id*. §10.

286. *Id*. §11(a).

287. *Id*. §11(c).

288. Supra notes 276, 277.

289. *Id*. §1, Alternative Provisions.

290. *Id*. §2(a).

291. *Id*. §2(d).

292. *Id*. §2(h).

293. *Id*. §3(3).

294. *Id*. §4(b).

295. *Id*. §2(i).

296. 35 Pa. Stat. Ann. §691 (Purdon 1977).

297. NACD, supra note 162 at 106.

298. Interview with A. Schadel, Pennsylvania State Conservation Commission.

299. NACD, supra note 162 at 107.

300. 35 Pa. Stat. Ann. §691.5 (Purdon 1977).

301. *Id*. §691.402.

302. *Id*. §691.316.

303. Supra note 298.

304. 71 Pa. Stat. Ann. §510-20 (Purdon Cum. Supp. 1977-78).

305. 71 Pa. Stat. Ann. §510-1(20)(22) (Purdon Cum. Supp. 1977-78).

306. 35 Pa. Stat. Ann. §691.5(a)(b)(Purdon 1977).

307. *Id*. §691.5(c)(d).

308. *Id*. §691.402(a).

309. *Id*. §691.402(b).

310. *Id.* §691.316.

311. Appeal to Environmental Hearing Board authorized by 71 Pa. Stat. Ann. §510-21 (Purdon Cum. Supp. 1977-78).

312. Supra note 298.

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314. *Id.*

315. 35 Pa. Stat. Ann. §691.602(a)(Purdon 1977).

316. *Id.* §691.602(d).

317. *Id.* §691.602(b).

318. *Id.* §691.602(c).

319. *See* *Id.* §691.602(e).

320. *See* historical note following §691.602.

321. Supra note 298.

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323. 35 Pa. Stat. Ann. §691.605 (Purdon 1977).

324. 25 Pa. Code 102 (1976).

325. *Id.* 102.13.

326. *Id.* 102.10.

327. *Id.* at 102.15.

328. W. Peechatka, the Pennsylvania Experience *in* Sediment: Proceedings of the 1974 Fall Meeting on Sediment and Erosion Control in the States of the Potomac River Basin 16-17 (Interstate Comm. on the Potomac Basin 1975).

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331. Pennyslvania Department of Environmental Resources, Soil Erosion and Sedimentation Control Manual for Agriculture 4 (1975).

332. Id.

333. Id. at 5.

334. Id. at 5.

335. Id. at 6-7.

336. Id. at 5, 8-11.

337. Id. at 5.

338. NACD, supra note 162 at 154.

339. Ohio Rev. Code Ann. §1515.30(E) (Page Supp. 1976).

340. Id. §1515.30(E)(1)(2).

341. Id. §1501.20.

342. Sec. 1501.201, 1971-72 Ohio Laws 519.

343. Ohio Rev. Code Ann. 1515.30(D) (Page Supp. 1976).

344. Id. §1515.08(L).

345. Id. §1515.08(K).

346. Id. §1501.20.

347. Id. §1515.08.

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349. NACD, supra note 162 at 171-182.

350. NACD, supra note 162 at 172, 174.

351. Id. at171, 177-78; supra note 348.

352. Id. at 172, 178; supra note 348 at 5.

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354. NACD, supra note 162 at 180-82.

355. Interviews with F. Heft, Chief, and R.L. Goettemoeller, Pollution Coordinator, Ohio Div. of Soil and Water Districts.

356. H.B. No. 1011, 111 G.A. (1975-1976).

357. See Sub. H.B. No. 513 and Am. Sub. H.B. No. 513, 112 G.A. (1977-78).

358. Am. Sub. H.B. 513112 G.A. (1977-78) passed Sept. 14, 1978 approved Oct. 13, 1978. Effective date Jan. 12, 1978 (pertinent sections will be codified in Ohio Rev. Code §§1515.01, 1515.30, 1515.31, 1515.32, 1515.33 and 1515.99. Hereinafter all citations to this Act will be to the section numbers of the code).

359. §1515.01(F).

360. §1515.30(E).

361. §1515.30(F).

362. §1515.30(E)(1).

363. §1515.30(E)(4).

364. §1515.30(E)(5).

365. §1515.30(E)(6).

366. §1515.30(6).

367. §1515.31.

368. Id.

369. §§1515.30(H), 1515.32.

370. See note 355.

371. §1515.30(I).

372. §1515.99.

373. §1515.32.

374. §1515.33.

375. N.Y. Soil & Water Conservation Dist. Law §9(7-a) (McKinney Cum. Supp. 1977-78).

376. Id. §3(11).

377. *Id.* §3(12).

378. *Id.* §9(7-a).

379. *Id.*

380. Interview with W. Croney, Exec. Sec., New York Soil and Water Conservation Committee.

381. *Id.*

382. N.Y. County Law §223 (McKinney 1972 and Cum. Supp. 1977-78).

383. *Id.* §299.

384. *Id.* §224(8).

385. *Id.* Art. 5-a.

386. N.Y. Envir. Conserv. Law §15-1103 to 1113 (McKinney 1973).

387. N.Y. Town Law §261 (McKinney 1965).

388. *Id.*

389. *Id.* §267.

390. *Id.* §268.

391. P.A. 89-159 (1977), Ill. Ann. Stat. ch. 5, §§106-138.10 (Smith Hurd Cum. Supp. 1978).

392. *Id.* §108.12.

393. *Id.* §128 (Smith Hurd 1975).

394. *Id.* ch. 34, §3151 (Smith Hurd Cum. Supp. 1978).

395. *Id.* ch. 139, §304 (Smith Hurd Cum. Supp. 1978).

396. *Id.* ch. 24, §11-13-1 (Smith Hurd Cum. Supp. 1978).

397. *Id.* ch. 5, §108.12 (Smith Hurd Cum. Supp. 1975).

398. *Id.* §138.7.

399. *Id.* §111(8).

400. *Id.* §138.4.

401. *Id.* §138.3.

402. Id.

403. Id. §138.4.

404. Interview with J. Berta, Chief, Bureau of Soil and Water Conservation.

405. Id. §138.3.

406. Id.

407. Id. §138.5.

408. Id. §138.6.

409. Id. §138.5.

410. Supra note 404; see also Ill. Ann. Stat. ch. 5, §108.15 (Smith Hurd Cum. Supp. 1978).

411. Id. §138.5.

412. Id.

413. Id.

414. Id.

415. Id. §138.6.

416. Id.

417. Id. §138.8.

418. Id.

419. Id.

420. Id.

421. Id. §138.9.

422. 1976 S.D. Sess. Laws ch. 242, S.D. Compiled Laws Ann. §§38-8A-1 to 38-8A-21 (1977).

423. 1937 S.D. Sess. Laws Ch. 19, §§9, 10, 11, 12.

424. Interview with A. Griffiths, Executive Director, South Dakota Conservation Commission.

425. S.D. Compiled Laws Ann. §38-8A-3.

426. *Id*. §38-8A-4.

427. *Id*. §38-8A-5.

428. *Id*. §38-8A-7.

429. *Id*. §§38-8A-6, 38-8A-8.

430. *Id*. §38-8A-9.

431. *Id*. §38-8A-11.

432. *Id*. §38-8A-8, 38-8A-12.

433. *Id*. §38-8A-15.

434. *Id*. §§38-8A-16, 38-8A-1.

435. *Id*. §§38-8A-19 through 38-8A-21.

436. *Id*. §38-8A-17.

437. *Id*. §38-8A-18.

438. *Id*. §38-8A-19.

439. *Id*. §38-8A-1.

440. *Id*. §38-8A-20.

441. *Id*. §38-8A-21.

442. Model Act, §7(c).

443. 1937 S.D. Sess. Laws ch. 19, §10.

444. Haw. Rev. Stat., §§180C-1 to 180C-4 (1976).

445. Haw. Rev. Stat. §342-32(1)(9) (1976).

446. 1974 Haw. Sess. Laws, ch. 249, §1 (Purpose and findings section).

447. Haw. Rev. Stat., §180C-2(a) (1976).

448. *Id*. §180C-2(b)(1).

449. *Id*. §180C-2(b)(2).

450. *Id*. §180C-2(b)(3).

451. *Id*. §180C-2(b)(4).

452. Interview with J. Parnell, Department of Health.

453. Haw. Rev. Stat. §180C-2 (1976); see Revised Ordinances of Honolulu, Chapter 23 (1976); Hawaii Ordinance No. 168 (Nov. 5, 1975); Kauai Ordinance No. 294 (Oct. 21, 1976); Maui Ordinance No. 816 (June 13, 1975).

454. Haw. Rev. Stat. §180C-4 (1976).

455. See county ordinances supra note 453.

456. Haw. Rev. Stat. §180C-4(1976).

457. Chapter 37-B can be found at Envir. Rep. (BNA) 756:0617 (1976).

458. Id. §2.

459. Id. §1.

460. See county ordinances supra note 454.

461. Supra note 452.

462. Id.

463. Revised Ordinances of Honolulu, §23-1.5(D); Hawaii Ordinance No. 168, §1.4(5); Maui Ordinance No. 816, §24-1.3.

464. Revised Ordinances of Honolulu, §23-1.5(D); Hawaii Ordinance No. 168, §1.4(5)(a); Kauai Ordinance No. 294, §1.7(E).

465. 208 Technical Committee on Nonpoint Source Pollution, Nonpoint Source Pollution in Hawaii: Assessments and Recommendations iii (Hawaiian Dept. of Health 1978).

466. Supra note 452.

467. Haw. Rev. Stat. §342-32(1) (1976).

468. Id. §§342-8, 342-32(9).

469. Can be found at (1976) Envir. Rep. (BNA) 756:0514.

470. Supra note 452.

471. Id.

472. 43 Fed. Reg. 50845, Nov. 1, 1978 (to be codified in 7 C.F.R. §634.27).

473. Supra note 465, at 8.

474. Id. at iii, supra note 452.

475. VI Code Ann. tit. 12, ch. 13, §531-38 (Cum. Supp. 1977).

476. Interview with W. Saalman, SCS district conservationist.

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